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CT660-128 SL ASIR 3.5

The Optima CT660 is GE's latest generation intelligent CT system. It is a scalable 128 slice platform including advanced innovations from our Discovery Series (TM). This means that Optima CT660 is capable of addressing your advanced clinical needs. Optima CT660 with Xstream gantry display is ready to help you deliver personalized care for your demanding patient schedule and quickly manage your unscheduled ED exams. With the Optima CT660 you get fast, high-quality acquisition at optimized dose for patients young and old, large and small, across a wide spectrum of procedures: angiography, brain, chest, abdomen, orthopedic, and more.

Key Features:

- Exclusive V-Res (TM) Detector technology providing 40mm of 0.625mm acquisitions
- Volara* XT DAS (Data Acquisition System): The Volara* XT digital DAS for faster sampling and improved image performance and reduced artifacts
- Fast coverage speed of 110mm/sec with sub-mm resolution
- Full 360 degree rotation in 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0 and 2.0(axial) seconds, ensuring short breath holds, comfortable exams and flexibility to customize protocols for unique patient needs with minimal coverage impact
- Routine thin slice scanning, as thin as 0.625mm optimizing the use of thinner images for sagittal, coronal, oblique, and volume image presentation and review
- The overlapped reconstruction feature enables 384 slices reconstruction in helical acquisitions and 128 slices per rotation in axial mode delivering improved Z-axis visualization performance relative to non-overlapped reconstruction
- Highly efficient compact geometry design delivering optimum performance of the x-ray tube and generator
- Image decomposition to:
 - Retrospective thin images from data sets where

thicker images were initially reconstructed

- Facilitates more detailed image analysis
- Improves 3D and reformat visualization
- ASiR reconstruction technology may enable reduction in pixel noise standard deviation (a measurement of image noise). The ASiR reconstruction algorithm may allow for reduced mA in the acquisition of images, thereby reducing the dose required(**).
- A reconstruction technology that may enable improvement in low contrast detectability(**)

(**) In clinical practice, the use of ASiR may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

Fast, User-Friendly, Simultaneous Workflow:

- Advanced Workflow Platform, the next evolution of GE's workflow platform built to help you maximize productivity.
 - Delivers up to 35 images per second (ips) reconstruction
 - Image Check delivers up to 55 images per second (ips) reconstruction (340x340 matrix)
 - Up to 10 fps network transfer rates
 - Direct Multiplanar Reformats (DMPR) that enables the move from 2D review to prospective 3D review of sagittal, coronal and oblique planes automatically
 - Data Export and Interchange that allow you to easily share images with referring physicians and patients
- One Stop ED mode: Optima CT660's exclusive 12" Xstream touch display on the gantry enables unique one stop ED scanning to streamlined ED exam workflow allowing patient selection, protocol selection and confirming exam parameters directly at the gantry, without having to leave the patients side.
- Includes reference protocols and the ability to customize

your own for a total of 6,840 programmable protocols

- SmartPrep with Dynamic Transition allows low dose intermittent monitoring of intravenous contrast enhancement in a user-selected section of anatomy. With Dynamic Transition when the prescribed contrast enhancement is reached the system will automatically transition from the monitoring phase to the scan phase
- 10 Prospective Multiple Reconstructions: Up to 10 reconstructions can be pre-programmed as part of the scan protocol prior to acquisition. The operator can select different start/end location, slice thickness, interval, interval reconstruction algorithms and display fields of view for each reconstruction. Assisting to prospectively prescribing the image reconstructions needed, even for complex trauma exams and freeing the user up to focus on the patient
- Remote tilt from the operator console to increase exam speed
- Built-in breathing lights with a countdown timer, so the patient does not have to guess how much longer to hold their breath
- New built-in 12-inch touch screen gantry display allows technologists to deliver personalized care by displaying the patient's name on it. When not scanning, the video of relaxing scenes or cartoons may have a calming effect on children or patients of all ages.
- By using One Step patient positioning on built-in 12-inch touch screen gantry display the bed provides automatic positioning according to the type of exam, reducing manual positioning and streamlining workflow
- In room start button mounted on gantry with countdown display, facilitates single technologist operation and improved departmental productivity
- GE software allows you to automate or build every task into the protocols to increase throughput
- Has up to 250,000 uncompressed 512 x 2 image files storage capacity, and 3,520 scan rotations or up to 1,500 scan data files, or up to 300 exams.

Dose Management Leadership:

- OptiDose management features: new bowtie filters optimized for adult and pediatric body exams, full 3D dose modulation, color coding for kids, tracking collimator hardware and software for x-ray beam tracking to name a few of GE's dose optimization features, all based on the ALARA principle
- Dynamic Z-axis tracking provides automatic and continuous correction of the x-ray beam shape to block unused x-ray at the beginning and end of a helical scan to reduce unnecessary patient radiation
- 3D Dose modulation - Before the scan, clinicians must select the desired Noise Index as well as the minimum and maximum mA setting. The system automatically accounts for the changing dimensions of the patient's anatomy, enabling patient to patient reproducibility in this aspect of image quality and real-time x-y-z during each scan.
- Tracking collimator hardware and software for x-ray beam tracking to minimize patient dose
- Filtration of the x-ray beam is optimized independently for body and head applications
- DLP (dose length product), and dose efficiency display during scan prescription provides the patient's dose information to the operator
- Dose Reporting provides access to the CTDIvol and DLP with the patient record prior and post exam. DICOM Structured Dose Report is also supported.
- Dose Check provides the user with tools to help them manage CT dose in clinical practice and is based on the standard XR-25-2010 published by The Association of Electrical and

Medical Imaging Equipment Manufacturers (NEMA), XR-29 Compliant. Dose Check provides the following:

- Checking against a Notification Value if the estimated dose for the scan is above your site established value
- Checking against an Alert Value where the user needs specific authority to continue the scan at the current

estimated dose without changing the scan parameters if the estimated dose exceeds the alert value

- The ability to define Alert Values for Adult and Pediatric with age threshold
- Audit logging and review capabilities
- Protocol Change Control capabilities

The Advanced Reconstruction breaks through existing limits on speed, image quality and flexibility to provide an optimized volumetric workflow solution from acquisition to final report and has the capability to deliver up to 16 full fidelity images per second (ips) reconstruction and 10 fps network transfer rates.

Clinical Benefits:

- CTA runoffs
- Thin slices fast; routine use of thin slices
- Organ coverage in arterial phase
- Long helical scans
- Multi-phase organ studies
- Improved multi-planar reformats with isotropic microvoxel imaging
- Fast scanning with outstanding image performance and GE's proprietary cross beam and hyperplane helical reconstruction algorithms
- System designed for optimization of z-axis resolution and dose with 0.625mm slice thickness

System Components:

Gantry:

- Advanced slip ring design continuously rotates the generator, Performix 40 X-ray tube, detector and Volara XT digital data acquisition system around the patient.
 - Aperture: 70 cm
 - Maximum SFOV: 50 cm
 - Rotational Speeds: 360 degrees in 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0 and 2.0(axial) seconds

- Tilt: +/- 30 degrees, speed 1 degree/sec
- Remote tilt from operator's console
- Integrated breathing lights and countdown timer
- Integrated 12-inch touch screen on gantry with workflow features
- Integrated start scan button with countdown timer to indicate when x-ray will turn on
- Visual readout is easy to read from the tableside or from the operator console. Gantry tilt controls are located on the side of the gantry.

Laser Alignment Lights:

- Defined internal and external scan planes to +/- 1mm accuracy
- Operate over full range of gantry tilt
- Coronal light remains perpendicular to axial light as gantry tilts

Table:

- Cantilever design for easy access
- Vertical range: 43.0 cm to 99.1 cm
- Vertical scannable range: 79.1 cm to 99.1
- Horizontal range: 1,745 mm (VT1700 table) or 2,045 mm (VT2000 table)
- Horizontal Speed: up to 137.5 mm/sec
- Table load capacity: 227 kg (500 lb) +/- 0.25mm positional accuracy

X-ray Tube: Performix 40 metal-ceramic tube unit

- Performix 40 tube with 6.3 MHU of storage and capable of 72kW operation provides increased helical performance with greater patient throughput
- Wide range of technique (10 mA to 560 mA, in 5 mA increments) gives technologist and physician flexibility to tailor protocols to specific patient needs, while optimizing patient dose, and providing the power needed to perform a broad spectrum of examinations.

- Maximum anode heat storage capacity: 6.3 MHU
- Dual Focal Spots:
 - Small Focal Spot: 0.9 x 0.7 IEC60336:2005
 - Large Focal Spot: 1.2 x 1.1 IEC60336:2005
- Maximum power: 72 kW
- Beam collimated to 56 degree fan angle

High Voltage Generator: High Frequency on-board generator allows for continuous operation during scan.

- 72 kW Output Power
- kV: 80, 100, 120, 140 kV
- mA: 10 to 560 mA, 5 mA increments

Maximum mA for each kV Selection (large focal spot):

- 400mA @ 80kV
- 480mA @ 100kV
- 560mA @ 120kV
- 515mA @ 140kV

V-Res Detector: The V-Res detector was designed for high performance imaging. The V-res detector benefits are:

- Solid 40mm coverage per rotation
- GE's patented ceramic detector material

Volara XT Digital DAS (Data Acquisition System): The Volara XT digital DAS dramatically reduces electrical noise for improved imaging performance.

- 2,460Hz maximum sample rate
- Effective analog to digital conversion

Optima CT660 Operator Console:

- 1,792GB of total system storage
- Up to 250,000 512 x 2 images and 3,520 scan or up to 1,500 scan data files or up to 300 exams
- 4.7 GB DVD-R/CD-R for DICOM interchange (not recommended as a long term archive)

Image Networking: Exams can be selected and moved between

the Optima CT660 CT System and any imaging system supporting DICOM protocol for network send, receive and pull/inquiry.

- Standard Auto-configuring Ethernet
- Direct Network Connection
- Supports 1GB or 1000/100/10 BaseT

DICOM Conformance Standards

- DICOM Storage Service Class
- Service Class User (SCU) for image send
- Service Class Provider(SCP)for image receive
- DICOM Query/Retrieve Service Class
- DICOM Storage Commitment Class Push
- DICOM Modality Worklist (incl. Performed Procedure Step) (through ConnectPro option)
- DICOM Print

The Optima CT660 workflow platform is designed to deliver high performance in each of these tasks:

- SmartTools Simplifies Scan Setup and Includes All Reconstructions, Filming, Archiving, Transferring Propsectively
- Workflow platform built on the LINUX operating system delivers up to 35 fps reconstruction and 55 fps with Image Check, and the fastest network transfer rates of up to 10fps
- Data Export and Interchange allow you to easily share images with referring physicians and patients
- Direct MPR that enables the move from 2D review to 3D image review of axial, sagittal, coronal and oblique planes automatically
- Exam Split delivers the capability to split a series of patient images into seperate groups for networking
- Exam Rx desktop environment provides the clinical tools desired for fast, efficient control of patient studies. Exam Rx tools include patient scheduling and data entry, exam protocol selection, protocol viewing and editing, scan data acquisition, image display and routine analysis,

AutoTransfer, AutoStore, and AutoFilm

- ImageWorks is a desktop environment designed to take advantage of the Optima CT660 CT System advanced computer systems. Standard features include archive, network and manual film control, as well as some advanced image processing such as Direct multi-planar reformatting (DMPR), multi-projection volume rendering (MPVR) and display. The ImageWorks desktop also provides a gateway for DICOM 3.0 image transactions, either through a local area network, or via DICOM-formatted media
- Volume Viewer includes Volume Analysis, Volume Rendering and Navigator software. This combination allows the user to render volumetric data in three dimensions for use in analysis of patient condition, i.e. CT Angiography (CTA), gives more information on the spatial relationships of structures than standard 3D, allows the translucent visualization of structures for improved problem solving, can perform "virtual endoscopies" of air and contrast filled structures. Enables 3D reformats in any plane, ALL on the Xstream ready console

Scan Modes: The Optima CT660 system can perform virtually any clinical application due to its wide variety of scan modes. Helical scan mode offers continuous 360 degree scanning with table incrementation and no interscan delay. Axial scan mode allows for up to 64 contiguous axial slices acquired simultaneously with each 360 degree rotation.

- Helical scanning pitches: 0.516:1, 0.984:1, 1.375:1
- Retrospective reconstruction image thicknesses: 32 x 0.625, 64 x 0.625, 128 x 0.625*

* Available only with Overlapped Reconstruction option (axial mode & 40 mm coverage)

Scan Enhancements:

- Anatomical programmer: a ten region anatomical selector allows quick and easy access to user programmable protocols and a separate selector for adult and pediatric

exams with greater than 6,840 protocol storage available.

- Protocols include preset scan time, kV, mA, scan mode, image thickness and spacing, table speed, scan FOV, display FOV and center, recon algorithm, and special image acquisition and processing options like DMPPR
- Any scan parameters may be edited for each scan or all scans - either before or during an exam. The number of scans may also be easily changed
- AutoScan: Automates longitudinal table movement and start of each scan
- Auto-Voice: 3 preset (9 languages) and 17 user defined messages automatically deliver patient breathing instructions, especially useful for multiple helical scanning
- Trauma Patient: Allows patient scans and image display/analysis without entering patient data before scanning
- Reconstruction Algorithms: Soft Tissue, Standard, Detail, Chest, Bone, Bone Plus, Lung, and Edge

For US and Canadian Customers, this quotation includes access to the DoseWatch Explore application for a period of time concurrent with the system warranty. DoseWatch Explore is an introductory dose management software application that provides you secure access, via any PC with internet access, to dose and protocol data from this system. An InSite connection to the system and completion of the registration process is required to use the DoseWatch Explore application.

Warranty: The published Company warranty in effect on the date of shipment shall apply. The Company reserves the right to make changes. All specifications are subject to change. Regulatory compliance: This product is designed to comply with applicable standards under the radiation control for Health and Safety Act of 1968.

Laser alignment devices contained within this product are appropriately labeled according to the requirements of the Center for Devices and Radiological Health.

Siting Considerations: See the Pre-Installation manual for details

of the siting requirements for the Optima CT660.

This product is a CE-compliant device that satisfies IEC60601-1:1998 and applicable collateral and particular standards, including regulations regarding Electro-Magnetic Compatibility (EMC) and Electro-Magnetic Interference (EMI), pursuant to IEC-60601-1-2:2004.

This product complies with NEMA Standard 29-2013 / MITA Smart Dose Standard.

2 1

English Keyboard Kit

English Keyboard Kit

3 1

Optima CT660 Standard cable set

Optima standard cable set

4 1

VT1700V

The Optima 1700 table enables volume scanning. Key features of this 1700 table include: easy patient access by lowering to <17 inches from the floor, 500lb weight capacity, up to 1700mm scannable range, 137.5 mm/sec travel time, real-time Z-axis position feedback between gantry and table.

5 1

SmartStep with Monitor

SmartStep for CT Scanner Systems (Includes In -Room Monitor & Boom)

SmartStep Enables an Imaging Mode for Performing Biopsies and Other Interventional Procedures. An In-room Monitor, Hand Held Controller, X-ray Exposure Foot Pedal and Cradle Handle Provide In-room Control for Image Acquisition and Image Review. The Hand Held Controller Provides the Operator with Controls to Prepare the Scanner for Imaging, to Turn Alignment Lights On and Off, to Move the Cradle, Review Images and Adjust the Window Width and Level; and the Foot Switch Provides In-room Control of X-ray On.

A Highly Functional Image Display Presents a Set of 3 Interventional Images in 3 Viewports, a Free Viewport, and Timers for the Remaining and Accumulated Time. The Display Control

Panel Provides Roam, Zoom, Magnify, Measurement, Annotation, Grid, Image Orientation, and Save Screen Image Review Capabilities. Data Acquisition Includes a 4i Data Acquisition Mode Using 4x1.25 mm, 4x2.25 mm, and 4x3.75 mm Detector Configurations and a 3i Reconstruction Mode to Create 2.5, 3.75 and 7.5 mm Thick 512 Matrix Images. All Scan Fields of View and Reconstruction Algorithms are Available with 0.8s and 1.0s Gantry Rotation Speed.

System Includes the In-room Monitor & Boom .

Low Dose Cardiac Package

The Low Dose 5-Beat Cardiac package allows the user to acquire cardiac imaging exams with retrospective or prospective gated acquisitions utilizing up to 0.35 second rotation speed for excellent cardiac exams. This package contains the following items necessary for CT Coronary Angiography:

SnapShot Imaging can be used to acquire ECG Gated CT Images of the coronary arteries, cardiac anatomy and various other applications that require temporal resolution to reduce heart motion effects. The SnapShot Imaging package includes hardware and software necessary for cardiac studies with CT.

SnapShot imaging is designed to produce optimized cardiac images with minimum cardiac motion effects. Three different imaging acquisition techniques are available for the user

- SnapShot segment - single sector algorithm with temporal resolution (TR) of 175ms
- SnapShot Burst - dual sector algorithm with TR of 87ms
- SnapShot Burst Plus - 4 sector algorithm with TR of 43ms

Xtream 12" Gantry and Operator Console ECG Trace:

- The ECG trace provided by the Ivy monitor will be displayed on the CT gantry and operator's console with this option. Allowing the user to display the live trace of the patient's heart rate and display the actual location of the window of time when the images are being acquired. It will provide easy access to patient cardiac output status and assist in providing visual feedback for optimum acquisition start.

- The ECG Editor allows the user to retrospectively modify trigger points identifying R-peaks on ECG trace as displayed on the console. The capability may improve successful cardiac acquisition rate by enabling users to perform the modification in the cases with irregular heartbeat or suboptimal triggers.

Cardiac Enhancement Filters:

- Noise reduction filters, providing three levels of image filtration while preserving of edge image detail coupled with patient dose reduction of up to 30%.

ECG Dose Modulation:

- ECG gated dose modulation reduces patient dose by modulating x-ray technique during acquisition based on heart phase.

SnapShot Pulse is a cardiac scanning technique that helps reduces patient dose by up to 83%, and improves cardiac workflow, with uncompromised image quality. SnapShot Pulse uses prospectively triggered axial acquisitions synchronized by the patient heart rate, in which X-rays are turned on only during the required heart phase and turned off completely at all other times. In essence, the technique captures a complete picture of the heart using a series of three to four snap shots taken at precise patient table positions and precisely timed to correspond to (relative to conventional cardiac CT acquisitions).

SnapShot Pulse helps improve workflow by reducing the size of image set to be reconstructed, reviewed and post processed. A typical SnapShot Pulse series consists of 280 to 400 images, compared with up to 3,000 images in a typical helical cardiac scan series. Since there's a smaller number of images to reconstruct, SnapShot Pulse takes less time, yet still delivers the same amount of information as a helical cardiac exam.

The Ivy Monitor comes in the cardiac package. It will be used to monitor patient cardiac output and synchronize acquisition with that output.

The Freedom workspace is an ergonomic working environment specifically designed for use with the GE Healthcare imaging systems. The sleek table design enables the efficient use of space while enhancing clinical workflow and technologist comfort.

The Freedom workspace provides a minimalist footprint to improve patient visibility and giving the user easier access to patients in the imaging suite.

It offers sit/stand and horizontal/vertical monitor flexibility. It can also help reduce noise and heat with remote location options of the console. The non-adjustable Freedom workspace version is 1300mm long x 895mm wide x 850mm height and weighs 55.8kg.

8	1	Chair Chair for CT scanner
9	1	Adaptor kit for Monitor B7710LN Adaptor cabling for console with LCD monitor & Suspension
10	1	In-Room Monitor Cable In Room Monitor Cable for RIO console
11	1	2 Phase Uninterruptible Power Supply Uninterruptible Power Supply Exide Uninterruptible Power Supply. Custom Designed Firmware to Interconnect with LightSpeed Pro, LightSpeed RT, Optima and BrightSpeed Systems. The UPS Primarily Backs Up the System Computer Functions. Bridges Short Power Outages and Provides Time for Crossover from Normal Main Power to Emergency Power. Must be Located Within Eight Feet of the PDU.
12	1	CT Service Cabinet Service cabinet for system accessories storage
13	1	REAR CABLE COVER Cable Cover for LightSpeed Gantry. The Covers will Provide Protection for the Cables & the Product.

14 1

90 Amp Main Disconnect Panel for CT

The 90Amp CT system main disconnect panel (MDP) serves as the main facility power disconnect source installed ahead of the system PDU. The MDP will disconnect system power on first loss of incoming power, helping to prevent damage to system components. It also includes an automatic restart control circuit which restores power to the CT System PDU after a power outage.

- Can reduce installation time and cost by eliminating delays in obtaining individually enclosed components and on site assembly (ex: main circuit breaker, feeder overcurrent devices, magnetic contactors and UPS emergency power off are combined into a single panel)
- Configuration flexibility - can be used as a stand-alone main disconnect or with the optional partial system UPS. (On systems where the optional partial system UPS is used the main disconnect panel also provides NEC mandated emergency power off control to both the PDU and UPS)
- Designed and tested for GEHC CT products

Specifications:

- Automatic restart incorporates an adjustable time delay to delay main power until the power has stabilized for 5 seconds
- One flush wall mounted remote emergency off pushbutton furnished with each system
- UL, cUL and CE labeled

15 1

Medrad Stellant D Dual Flow Injector - Ceiling Mount (Short Post)

Medrad Stellant D Dual-Flow Ceiling Mount Injection System with Short Post. Requires E8007PJ Mounting Plate be added to the order....E

16 1

OCS III MOUNTING PLATE

OCS III MOUNTING PLATE

17 1

CT Table Slicker with Cushion - 1700 Systems (2-pc Set)

CT Table Slicker with Cushion - 1700 Systems (2 Piece Set)

FEATURES/BENEFITS

- Two-piece, sealed slicker cushion set has comfort pads enclosed inside the slicker cover and extender cover
- Durable, clear PVC plastic cover facilitates faster, more thorough cleanup of blood and fluids
- Increase system uptime by protecting table from spills and particulate contaminants
- Thermo-sealed seams and flaps prevent contaminate buildup in hard to clean areas

COMPATIBILITY

- VCT with GT 1700 Table, CT HD750

18 1

CT Footswitch Slicker - 2000 & 1700 Systems

CT Footswitch Slicker - 2000 & 1700 Systems

The footswitch slicker for CT VCT 2000 and 1700 systems is made of durable, clear PVC plastic that protects the footswitch and facilitates faster, more thorough cleanup of contamination caused by blood and other body fluids. Cover is held securely in place with Velcro...H

19 1

6 Day CT TiP Onsite System Training

6 Day CT TiP Onsite System Training

CT Onsite Training for a new CT system

- One 4 day onsite visit to coincide with system start-up.
- One 2 day onsite follow-up visit 6-8 weeks post system start up.

During the first visit, the applications specialist will work with the medical and technical staff on system operation and patient procedures. The training produces the best results when a dedicated core group of 2-4 CT technologists complete the session with a modified patient schedule. It is suggested that key physicians are available to participate in the protocol implementation and image quality review sessions. By the end of

this visit, the core group should be able to perform the routine patient procedures.

The 2 day revisit is suggested after the staff has run the system for 6-8 weeks, however this is flexible based on the site needs. The training will focus on the intermediate and advanced functions of the system or special needs of the customer. The training produces the best results when the same dedicated core group of 2-4 CT technologists from the initial visit complete the session with a modified patient schedule.

This training program must be scheduled and completed within 12 months after the date of product delivery.

20 1

2 Days CT TiP Onsite Training

2 Days CT TiP Onsite Training

Two Day CT Onsite Training provided from 8AM to 5PM, Monday through Friday. Includes T&L expenses. Days provided consecutively.

This training program must be scheduled and completed within 12 months after the date of product delivery.

21 1

4 Days Ct Onsite

4 Days CT TiP Onsite Training

Four Days CT Onsite Training provided from 8AM to 5PM, Monday through Friday. Includes T&L expenses. Days provided consecutively.

This training program must be scheduled and completed within 12 months after the date of product delivery.

22 1

CT LS 7X & OPTIMA 660

CT LightSpeed 7x and Optima 660 (Class/Lab)

The CT LightSpeed 7x & Optima 660 course is a differences class and is intended for Engineers who have completed (R0026CT) LightSpeed Pro Training. It will equip the Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the 32/64-slice family of scanners (including LightSpeed VCT, LightSpeed VCT XT, LightSpeed VCT

Select, and Optima 660. This training must be used within 2 years from the purchase date.

23 1

CT LIGHTSPEED PRO ADV SER

The LightSpeed Pro Advanced course is intended for engineers servicing LightSpeed Pro 16, LightSpeed RT, and forward production LightSpeed 16/Ultra/Plus (starting in 2004) systems. This course must be taken within 2 years from the purchase date.

24 1

CT Basic Physics/Instrumentation (web)

CT Basic Physics/Instrumentation (Web)

The CT Fundamentals Course is Designed for Service Engineers who have Little or No Familiarity with CT Systems. The Course Teaches General Processes, Concepts, and Equipment Used in CT Scanning. This Course is Delivered Via the internet as an online training course. This course must be taken within 2 years from the purchase date.

25 1

CT LIGHTSPEED PRO ADV SVC

CT Lightspeed Pro Advanced Service (Web)

Web course is 8 hours long

Sales Description:

Introduction to CT LightSpeed Pro system theory and subsystems

Executive Summary:

This is a computer-based training course intended to prepare Service Engineers on basic system theory for the LightSpeed Pro product line.

Course Competencies:

The curriculum builds on concepts taught in CT Basic Physics and is a prerequisite for the CT LightSpeed Pro and Discovery ST in-resident training classes at the GE Healthcare Institute.

Special Considerations:

A functioning laptop computer with a CD-ROM reader, network card and a modem card is required for use during this course.

The browser on the computer must be IE4 or Netscape 4.5 or higher. Minimum system requirements include 133 MHz Windows 95, NY 4.0 or higher 32 MB of RAM 16-bit color display adapter. Proof of completion of this eLearning course is necessary prior to attending any subsequent GE Healthcare In-Resident training. This course contains proprietary content. For customers attending this course, special paperwork is required to take this course. Please see the registration page for details on the enrollment process. This course must be taken within 2 years from the purchase date.

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GLOBAL OPERATOR CONSOLE

CT GLOBAL OPERATORS CONSOLE 3,4,& 5

The Global Operators Console can be referred to as the Xtreme console as well. This is the current operator console for the CT LightSpeed and PET Discovery ST systems. This course must be taken within 2 years from the purchase date.

27 1

OPTIMA CT660 SERVICE (WEB)

Optima CT660 Service (web)

This upgrade course taken online is intended for Support Engineers who have previous LightSpeed VCT training. Topics covered include: New gantry display, new power saving mode, new gantry axial motor and control, new gantry covers removal and installation, safety awareness with gantry cover mounting hardware, new operators console (RIO), load from cold-Saturn detector. This course must be taken within 2 years from the purchase date or it expires without refund.

28 1

Troubleshooting Basics Service (web)

Troubleshooting Basics Service (Web)

This Course is Intended for Individuals Involved in Servicing Medical Equipment. By Taking This Course, You will Learn a Proven Process for Troubleshooting Problems with Medical Equipment. You will Also Learn How to Use Various Tools in a Troubleshooting Situation and How to Interpret Error Messages. This Course Does Not Address How to Troubleshoot Specific

Products. It is Recommended That you Have Fundamental Training in a Modality Prior to Taking This Course. This course must be taken within 2 years from the purchase date.

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NETWORKING & DICOM BASIC

Networking and Dicom Basic for DI Service (Web)

Training will prepare engineers on configuring and troubleshooting networks, which use the DICOM protocol for transferring patient data and how to read and use DICOM Conformance Statements.

This course covers the following:

- Introduction to 7 layer OSI and 5 layer TCP/IP protocols (Basic model only)
- Identify hardware used in networking
- Review of the most used networking devices, cables, NIC, switch and routers
- Simple network connection with 2 to 5 devices
- Dicom definitions, theory and configuration

This course must be taken within 2 years from the purchase date.

30 1

SERVICE PACK 20Y

Service package delivered for the lifetime of the equipment (20 years)

SnapShot Imaging Package

The Snapshot Imaging Package allows the user to acquire cardiac scans utilizing up to 0.35 second rotation speed for excellent cardiac exams. This package contains the following items necessary for CT Coronary Angiography on these systems.

The features associated with the Snapshot package are:

- Edge preserving cardiac filters which allows the user to reduce dose up to 30% with the 3 levels of filtration available
- ECG trace on the gantry and console allowing the user to display the live trace of the patients heart rate and display the actual location of the window of time when the image is being acquired.

Snapshot Imaging package can be used to acquire helical retrospective ECG Gated CT Images of the coronary arteries, cardiac anatomy and various other applications that require temporal resolution to reduce heart motion effects. The Snapshot imaging package includes the following hardware and software necessary to acquire cardiac studies with CT.

Snapshot imaging software for the operator console is designed to produce optimized cardiac images with minimum cardiac motion effects. Three different imaging acquisition techniques are available to the user

- Snapshot segment - single sector with temporal resolution of 175ms
- Snapshot Burst-dual sector with temporal

resolution of 87ms

- Snapshot Burst Plus-4 sector with temporal resolution of 43ms

Ivy monitor: The Ivy ECG Monitor comes in this cardiac package. It will be used to monitor patient cardiac output and synchronize acquisition with that output.

Xtream 12" Gantry and Operator Console ECG Trace: The ECG trace provided by the Ivy monitor will be displayed on the CT gantry and operator's console with this option. Allowing the user to display the live trace of the patient's heart rate and display the actual location of the window of time when the images are being acquired. It will provide easy access to patient cardiac output status and assist in providing visual feedback for optimum acquisition start.

R-Peak Editor: The R-Peak Editor allows user to retrospectively modify trigger points identifying R-peaks on ECG trace as displayed on the console. The capability may improve successful cardiac acquisition rate by enabling users to perform the modification in the cases where there is irregular heartbeat or suboptimal triggers.

Cardiac Enhancement Filters are noise reduction filters, providing three new levels of image filtration while preserving of edge image detail coupled with patient dose reduction of up to 30%.

ECG Dose Modulation ECG gated dose modulation reduces patient dose by modulating x-ray technique during acquisition based on heart phase.

SmartScore Package

The SmartScore package provides ECG-gated hardware for both prospective and retrospective gating for coronary artery calcium scoring.

Xtream 12" Gantry and Operator Console ECG Trace:

The ECG trace provided by the Ivy monitor will be displayed on the CT gantry and operator console with this option. Allowing the user to display the live trace of the patient's heart rate and display the actual location of the window of time when the image is being acquired. It will provide easy access to patient cardiac output status and assist in providing visual feedback for optimum acquisition start.

The Ivy Monitor comes in this calcium scoring package. It will be used to monitor patient cardiac output and synchronize acquisition with that output.

Calcium scoring analysis software is not provided with this package.

VolumeShuttle for CT systems

VolumeShuttle innovatively provides the 80-mm of coverage necessary for accurate dynamic neuro angiographic and perfusion studies with a single contrast injection. GE's exclusive real-time scan control, system architecture, and fast, smooth table acceleration and deceleration enable the patient to be effortlessly shuttled back and forth between two adjacent axial locations, with minimal inter-scan delay.

The GE CT Scanner system uniquely designed to make it all possible - as a result of these key scanner attributes:

- The 40-mm high resolution V-Res detector with micro voxel technology.
- Real-time system controls to precisely control table movement and X-ray control.

VolumeShuttle provides the wider coverage margin needed to allow for patient variability in the Circle of Willis (80mm) and from the basal ganglia to lateral ventricles (>60mm) - all with the existing

40-mm-wide detector and without the multiple contrast injections necessary with today's standard CT systems.

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3.5 day TiP HQ Class CT Cardiac Imaging - Full Service

TiP HQ Class CT Cardiac Imaging - Full Service

3.5 day CT course held in the Milwaukee area. Includes travel and modest living expenses.

This course covers anatomy, patient preparation, scanning, data reconstruction, and post processing.

This training program must be scheduled and completed within 12 months after the date of product delivery.