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O640 NM/CT System - 3/8" EXCEL

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Optima NM/CT 640 EXCEL is a general-purpose high performance hybrid SPECT imaging system. It combines integrated nuclear imaging sub-system featuring a free-geometry slim gantry, advanced all-digital Elite NXT detectors with 3/8" detectors, cantilevered patient table and powerful acquisition station, with a dedicated low-dose high resolution CT imaging sub-system designed for attenuation correction of SPECT and anatomic localization of radiotracer uptake in the body.

Including:

2 x Slim-All-Digital NM Elite™ NXT detectors with the following key features :

- o 3/8" crystal thickness
- o 59 high quantum efficiency PMT's, each PMT coupled with one ADC
- o Extra large, rectangular UFOV with uncut corners: 540 mm x 400 mm (21.25 Inches x 15.75 Inches)
- o Shielded for 40-620 keV energy range
- o Contoured detector housing for optimal cardiac and brain SPECT imaging

· 1 x Free-geometry 70 cm bore gantry, featuring real-time automatic body contoured scanning in both 180D and 90D detectors orientations for high efficiency SPECT and WB scans. The gantry features also upright and horizontal detector orientations for maximum clinical versatility and ultra-fast, simultaneous multi-axes motion which provides fast setup with the following key features :

- o Externally mounted detectors, with flexible positioning for all Major clinical studies, including stretcher, standing and seated Patients
- o Automatic, application-specific home positioning for table and detectors
- o Real-time status display
- o Intuitive, icon-based 20 function handset accessible from either side of the gantry
- o Real-time, infrared automatic body contouring system too safely minimize detector-to-patient distance in whole body, 90 degree SPECT and 180 degree SPECT
- o Fast, semi-automatic dual collimator exchange

· 1 x Dual-axis premium ergonomic patient imaging table with low-attenuation carbon fiber table-top with the following key features :

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- o Fast, manually controlled emergency patient egress
 - o Telescopic transporter ensuring accurate CT-SPECT registration
 - o Easy patient handling, comfortable tabletop
 - o Obstruction-free floor installation enables table pivot to 45 or 60 degree angles
 - o Automatic home positioning for common imaging procedures
 - o Optional integrated EKG

· 1 x user-friendly Hybrid SPECT/CT acquisition station.

The integrated SPECT-CT acquisition console employs a Graphic User Interface for exam scheduling, scan acquisition, CT reconstruction and scan QC as well as utilities for protocol editing and routine quality control and analysis.

In addition, the Bright Speed Elite CT desktop environment is available for CT imaging including: protocol definition, networking and archiving manual film control, as well as CT image processing such as multi-planar reformatting (MPR), multi – projection volume rendering (MPVR) and MR image display. Including the following key features:

(a) H/W

- o XW4600 HP workstation
- o Intel® Core 2 Quad Q9300
- o Graphic card – NVIDIA Quadro NVS 290
- o RAM graphic card - 256MB
- o 2 GB RAM
- o Hard drive size 2x80GB
- o Multi-Tasking, Multi-Windows Environment Connectivity via DICOM 3.0
- o Choice of various LCD monitors to be ordered separately
- o Broadband Connectivity to broadband/highspeed VPN (Virtual Private Network) connection, single point of access using 3DES encryption technology

(b) S/W

- o Multi-scan protocols define the normal sequence of scans for the selected study protocol and additional scans can be added.
- o Factory defined protocols support standard NM and SPECT-CT clinical applications.
- o Preview of scan conditions including display of:
 - § Spectrum for each detector is also shown and can be used to adjust the energy window
 - § Persistence display during patient positioning (visible on the console as well as the

gantry-side display).

§ ECG trigger signal display for quality control purposes

- o Synchronizing patient ECG trigger data with multi-gated nuclear image data framing

- o Storing the acquired data in the patient database

- o Online live display of:

§ Acquired data and imaging parameters

§ ECG trigger signal

§ Gantry status including gantry position & detector orientation

§ Progress and elapsed time

§ X-Ray exposure indicator

- o Data Viewer

§ Threshold and windowing control in multiple window settings

§ Cinematic display and scroll of dynamic and all multi-frame datasets

§ Selection of display color maps

· 1 integrated low-dose CT with 4 slice functionality , inherently SPECT-registered CT
Transmission attenuation correction and localization with the following key features :

- o Tube: GE MX135CT

- o Tube anode Heat Storage capacity : 2.0 MHU

- o Generator: GE Gedi 42 AC, 4.2 kW

- o Clinical operation tube current : 10-30 mA.

- o Scan Times: 1 or 2 sec per rotation

- o Pitch factors: 0.75:1, 1.25:1, 1.75:1

- o Detector type: Ceramic - gadolinium oxysulfide (Gd₂O₂S)

- o Number of slices: 4

Slice thickness : 2.5 mm

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GE NM 600 Series LEHR Collimators (2) with Cart

NM 600 LEHR Collimators with Cart

NM 600 Low Energy High Resolution Collimators

Includes:

- o Two LEHR Collimators

- o Collimators Mounted on a Dedicated
Collimator Cart

1	<p>D670/630 & B615 QC Point Source Holder</p> <p>An L-shaped metal plate attachable to the wall with an opening for a syringe in order to acquire point source-based flood acquisition at a few meters distance from vertically positioned detector for QA purposes.</p>
1	<p>D670/630 & B615 QC Flood Source Holder Kit</p> <p>Quality Control Flood Source Holder Kit A large plate mounted at a small distance above the NM detector on which the flood source is positioned in order to perform acquisition of flood studies for QA/QC purposes.</p>
1	<p>QA COR Source Holder</p> <p>Center of rotation source holder for Quality assurance , easily attached to Infinia or Ventri table.</p>
1	<p>NM 600 SERIES BARPHANTOM</p> <p>bar phantom for spatial resolution and linearity tests of gamma cameras. The phantom consists of four quadrants with different bar specification: For each of the quadrant, bar spacing is 2.5mm, 3.2mm, 3.5mm & 4.0mm.</p>
1	<p>STRAPS AND PAD KIT</p> <p>Long table pad and straps</p>
1	<p>Axial Head Holder</p> <p>D670 AXIAL HEAD HOLDER</p> <p>The Axial Head holder is ergonomically designed to position patient's head outside of the patient tabletop pallet , enabling brain SPECT orbiting as close as possible to the patient's skull with maximal coverage of the target tissue</p>
1	<p>NM600 TOUCH RULER</p> <p>NM 600 Touch Ruler</p> <p>An interactive touch-sensitive device mounted at one side of the patient table, used to define nuclear imaging scan range (start and stop points), saving the need to enter these values manually from the operator console</p>

1	CT Service Cabinet Service cabinet for system accessories storage
1	NM600 DETECTORS DISMOUNT NM600 DETECTORS DISMOUNT An option enabling transportation and mobilization of the NM600 series gantry separated from the detectors for easier load in elevators or easier access through restricted paths such as narrow hallways or doorways
1	O640 SEISMIC KIT Seismic anchoring kit for Optima NM/CT 640
1	SEISMIC KIT FOR NM600 PAR Seismic kit for NM600
1	Evolution for Bone SPECT Camera License EFB SPECT CAMERA LICENSE Enables Camera capability to provide data for Evolution for Bone (EfB). EfB provides Evolution Resolution Recovery reconstruction on SPECT bone scans. The EfB application may be utilized to provide equivalent image quality on half-dose or half-time bone scans.
1	EFB PLANAR CAMERA LICENSE EFB PLANAR CAMERA LICENSE Enables Camera capability to provide data for Evolution for Planar Bone (EfPB). EfPB provides adaptive Structure Matching non-Local filtering on planar bone scans. The EfPB application may be utilized to provide equivalent image quality on half-dose or half-time bone scans.
1	Evolution for Cardiac Camera License EFC SPECT CAMERA LICENSE Enables Camera capability to provide data for

Evolution for Cardiac (EfC). EfC provides Evolution Resolution Recovery reconstruction on SPECT Myocardial Perfusion Imaging (MPI) scans. The EfC application may be utilized to provide equivalent image quality on half-dose or half-time MPI scans.

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EVOLUTION TOOLKIT Camera License
EVOLUTION TOOLKIT CAMERA LICENSE
Enables Camera capability to provide data for Evolution Toolkit. The Evolution Toolkit provides Evolution Resolution Recovery reconstruction on SPECT scans resulting in improved resolution and contrast. The Evolution Toolkit application may be utilized with included statistical re-sampling tools to determine optimal dose or time reduction on SPECT studies. Evolution Toolkit supports Tl201, Tc99m, I-123, Ga67, In111, & I-131 isotopes.

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4 Days NM TiP Onsite Training
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Four Days NM 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.

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6 KVA UPS for Nuclear Medicine

6 KVA UPS for Nuclear Medicine

FEATURES/BENEFITS

- The use of uninterruptible power enables the system imaging to be completed after the loss of supply power, and allows for saving of valuable data and orderly system shutdown
- The Online Double Conversion UPS eliminates all power anomalies such as noise,

transients, overvoltage and undervoltage, which could damage the imaging system's sensitive computer components

- Improves imaging system reliability, reduces service costs, and increases system uptime
- Cell Saver Technology provides conditioned power even during severe brownout conditions without depleting battery resources
- System monitoring via: LanSafe III / FailSafe III software, (2) RS-232 Ports
- PowerPass Module further enhances reliability through Maintenance Bypass Switch which performs maintenance or upgrade your UPS without powering down your critical systems

SPECIFICATIONS

- Dimensions (H x W x D): 33.6" x 9.9" x 15.8"
- Weight: 218 lbs.
- Input Voltage: 200 - 240 VAC
- Output Voltage: 120/240, 120/208 VAC
- Frequency: 45-65 Hz

COMPATIBILITY

- Maxxus NM

NOTES:

- Customer is responsible for rigging and arranging for installation with a certified electrician
- ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

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SEISMIC KIT FOR E4502JJ A

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MAIN DISCONNECT PANEL FOR GE 640 NM-CT SYSTEM

Main disconnect panel for GE 640 NM-CT system

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Ivy 7600 Cardiac Trigger Monitor Kit - No Recorder, Americas Labeling. For GEHC Nuclear Med.

The Model 7600 is Ivy Biomedical's fifth generation of cardiac trigger monitors intended primarily for use on patients in applications requiring precision R-wave synchronization. Incorporating a simple, easy to use touchscreen interface, the 7600 displays two simultaneous

ECG vectors along with the patient's heart rate.
The Trigger ECG vector (top waveform) can be selected from Leads I, II III or Auto Lead Select. The Second ECG vector (bottom waveform) can be selected from Leads I, II or III. If required, High and Low heart rate alarm limits can be adjusted to bracket the patient's heart rate so that a violation of these limits produces an audible and visual indication of the alarm.
Includes roll stand

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Xeleris 3x Upg to X4-0 Workstation

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X4.0 FROM X3.1 UPGRADE

Xeleris 4.0 Software upgrade from Xeleris 3.1
Xeleris 4.0 functional imaging workstation is a Nuclear Medicine, PET, NM/CT, and PET/CT processing, analysis, and review system. Designed with productivity in mind, it can accelerate workflow and provides a powerful clinical diagnostic tool to the medical imaging community.
Combining streamlined workflow with a comprehensive clinical library and extensive networking capabilities on a functional imaging workstation, Xeleris 4.0 is at the nucleus of productivity in the clinical imaging department. Utilizing the GE Healthcare-wide graphical user interface, Xeleris 4.0 is the processing and review platform of the Discovery*, Optima* and Brivo* NM and NM/CT series, Infinia* Hawkeye* 4, Venti, Discovery PET/CT 600 series, and all other molecular imaging cameras in GE Healthcare's current offering. Xeleris 4.0 provides the automated processing and connectivity necessary in today's demanding

environment.

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Xeleris 4 Evolution Bundle

Xeleris 4 Evolution Bundle Software License for a single Xeleris 4 Workstation and all its XFL clients. This item contains the following Evolution licenses.

- Xeleris 4 Evolution for Bone (EfB): Provides Evolution Resolution Recovery reconstruction on SPECT bone scans. The EfB application may be utilized to provide equivalent image quality on half-dose or half-time bone scans.

This license processes Infinia 2, Infinia Hawkeye 4, and Discovery 600 family of camera data. EFB SPECT CAMERA LICENSE (H3602NH) required.

- Xeleris 4 Evolution for Planar bone (EfPB): Enables reduced time or dose on whole body or spot bone studies. EfPB provides adaptive Structure Matching non-Local filtering on planar bone scans. The EfPB application may be utilized to provide equivalent image quality on half-dose or half-time bone scans. This

license processes Infinia 2, Infinia Hawkeye 4, and Discovery 600 family of camera data. Evolution Planar Bone Camera license (H3901NF) required.

- Xeleris 4 Evolution for Cardiac (EfC): Provides Evolution Resolution Recovery Reconstruction on SPECT Myocardial Perfusion Imaging (MPI) scans. The EfC application may be utilized to provide equivalent image quality on half-dose or half-time MPI tc99m scans. This

license processes Infinia 2, Infinia Hawkeye 4, Ventri, and Discovery 600 family of camera data. EFC SPECT CAMERA LICENSE (H3602NJ) required.

- Xeleris 4 Cardiac Morphing (CM): Provides Elastic registration of gated cardiac cycle to the end diastolic bin. The removal of blurring in the cardiac cycle provides enhanced clarity of myocardial wall visualization. Processes

data from Infinia 2, Infinia Hawkeye 4, Ventri and Discovery 600 family of camera data.

CARDIAC MORPHING CAMERA LICENSE (H3602PT) required.

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X3/X4 Extended Database

Extend the Xeleris 3 database with additional 700GB of data space enabling:

- o 8 times more than the standard database size
- o Logical partition to up to 5 different local databases
- o Connectivity to other stations is standard

(some limitations may apply with previous Xeleris versions)

" Does not require additional HW

Option available only on HP-Z400 hardware.

Note: the extended database does not replace other archive solutions and it is recommended to frequently backup any data.

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Q.Metrix License

A package enabling quantitative SPECT results in the form of MBq/ml and SPECT SUV (Standard Uptake Value). The Q.Metrix application utilizes advanced Evolution reconstruction with compensation for Attenuation, Resolution and Scatter. Patient demographics and dose information are incorporated to provide accurate quantitative results. Quantitative SPECT results are further enhanced with advance segmentation tools providing 2D and 3D organ and lesion characterization.

Q.Metrix supports data from Discovery NM/CT 670 and Optima NM/CT 640 using the following isotopes: 99mTc, 201Tl, 111In, 123I,

131I, and 67Ga and collimators: LEHR, MEGP, HEGP, ELEGP

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X4 VMX IR AND 3D NM-PET

VMX IR (NM/PET) and 3D FUSION NM/CT

VMX Image Registration (IR) allows registration of multiple hybrid data including SPECT/PET/CT/MRI Registered datasets can be displayed in multiple combinations of functional and anatomic display within VMX workflow.

Volumetrix 3D for Nuclear Medicine: 3D Fusion and Volume Rendering software for Xeleris 4 workstations.

- 3D display of SPECT/CT fused volumes.

- Segmentation to include or exclude portions of either volume in the 3D rendered images, including removal of the table from the CT image, and segmentation default types of Hot Spot, Adjacent, Spine, and Mediastinum

- Triangulation to view a defined location in all 2D slices

- Clip & Cut Planes to integrate traditional Axial, Sagittal, and Coronal slices simultaneously into the 3D rendered objects

- Default Anatomical Classification presets for a broad variety of cases with the ability to create customized presets

- Optimized layouts for both Single and Dual Monitor (additional option)

Enables the functionality on Xeleris 4 Workstation and all its XFL clients

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X3.1/X4 CEDARS SUITE 1st and 2nd

Cedars Sinai Cardiac Packages (option)
 A comprehensive set of nuclear cardiology protocols for advanced cardiac analysis, including:

- o Cedars Sinai Quantitative Perfusion SPECT (option)
- o Automatic 3-Dimensional software approach to quantitative Perfusion SPECT.
- o Cedars Sinai Quantitative Gated SPECT (option)
- o An application calculating the ejection fraction of the left ventricle and a 3D surface display is generated.
- o Cedars Sinai Companion (option)
- o Optional module for QGS and QPS applications features
 - 17 segment scores and templates in QPS
 - Diastolic filling parameters in QGS
 - Eccentricity ratio in QGS

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DATQUANT LICENSE

DaTQUANT application allows visual evaluation and quantification of Ioflupane (123I) images. DaTQUANT advanced quantification may provide additional information that would not be revealed by visual reading alone.

DaTQUANT includes: <UL LEVEL='FIRST'><LI LEVEL='FIRST'>Automated non-rigid registration with predefined Ioflupane (123I) template followed by manual adjustment and confirmation <UL LEVEL='FIRST'><LI LEVEL='FIRST'>Fast Ioflupane (123I) SPECT image quantitative analysis: computation of uptake values in the striatum, striatal binding ratios, putamen/caudate ratios, and left/right asymmetry <UL LEVEL='FIRST'><LI LEVEL='FIRST'>Repeatable and more accurate analysis <UL LEVEL='FIRST'><LI LEVEL='FIRST'>Easy and consistent reporting (PDF format) for referring physicians

Note: DaTQUANT is available for sale only for countries where Ioflupane (I123) pharmaceutical is approved for use.

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Q.BRAIN License

Q.Brain allows the user to visualize and quantify relative changes in the brain's metabolic function or blood flow activity

between a subject's images and controls, when used with radiopharmaceuticals approved by the regulatory authority

in the country of use, which may be resulting from brain function alterations in:

- Epileptic seizures
- Dementia, such as Alzheimer's disease, Lewy body dementia, Parkinson's disease with dementia, vascular dementia, and frontotemporal dementia.
- Inflammation
- Brain death
- Cerebrovascular disease such as acute stroke, chronic and acute ischemia
- Traumatic Brain Injury (TBI)

When integrated with the patient's clinical and diagnostic information,

Q.Brain application may aid the physician in the interpretation of cognitive complaints, neuro-degenerative disease

processes and brain injuries.

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Q.BRAIN Normals DB for ECD NeuroLite

Q.Brain Normals Data base for ECD NeuroLite

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Q.LUNG License

- Diagnosis of Pulmonary Embolism (PE), Chronic Obstructive Pulmonary Disease (COPD), Emphysema and other lung deficiencies.
- Assess the fraction of total lung function provided by a lobe or whole lung for Lung cancer resection requiring removal of an entire lobe, bilobectomy or pneumonectomy.

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X4 DUAL Monitor and License

Xeleris 4 Dual LCD Monitor & License for a single Xeleris 4 Workstation.

This item contains:

- o One 22" WideScreen format monitor for Xeleris 4 MI workstation. Provides 40% greater viewing area.
- o One Dual monitor license

Dual Monitor license enables the option on Xeleris 4 Workstation and all its XFL clients

4 Days NM TiP Onsite Training

4 Days NM TiP Onsite Training

Four Days NM 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.

Options

- | | |
|---|--|
| 1 | <p>GE NM 600 Series MEGP Collimators (2) with Cart</p> <p>NM 600 MEGP Collimators with Cart</p> <p>NM 600 Medium Energy General Purpose Collimators</p> <p>Includes:</p> <ul style="list-style-type: none">o Two MEGP Collimatorso Collimators Mounted on a Dedicated Collimator Cart |
| 1 | <p>GE NM 600 Series HEGP Collimators (2) with Cart</p> <p>NM 600 High Energy General Purpose Collimators</p> <p>Includes:</p> <ul style="list-style-type: none">- Two HEGP Collimators <p>Collimators Mounted on a Dedicated Collimator Cart</p> |
| 1 | <p>GE NM 600 Series PINHOLE Collimator (1) W/CART</p> <p>A set of 1 pinhole collimator with 3 inserts with collimator cart for NM 600</p> |
| 1 | <p>NM 600 LEUHR 2 W CART</p> <p>NM600 Series Low Energy Ultra High Resolution Collimator set</p> <p>Includes Two LEUHR Collimators. Both collimators are Mounted on a Dedicated Collimator Cart</p> |
| 1 | <p>NM600 PINHOLE BILATERAL</p> <p>The Bilateral Pinhole Motion enhancement option enables NM600 Series cameras to perform pinhole collimated imaging of both sides of a patient on the imaging table without moving the patient in procedures such as imaging of bilateral hips anteriorly or bilateral kidneys posteriorly.</p> |
| 1 | <p>NM600 LEHS COLL W CART</p> <p>A set of two Low Energy High Sensitivity Collimators for imaging procedures with Tc-99m and I-123, providing high</p> |

sensitivity scans for general purpose applications. Includes also a collimator cart for storage, loading/unloading the collimator on/off the NM600 Series NM detectors.

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GE NM 600 Series FANBEAM (2) W/CART

Fan Beam collimator enables higher efficiency brain SPECT studies compared to LEHR collimator.

- Recommended brain scan radius is 14-16 cm
- Focal distance from collimator surface is 350 mm
- Effective collimator thickness is 57 mm