

570-B60024  
VAMC FRESNO, CA

## Symbia Intevo 2

All items listed below are included for this system: (See Detailed Technical Specifications at end of Proposal.)

Qty	Item Description
1	<b>Symbia Intevo 2</b> The Symbia Intevo 2 is built on xSPECT technology, enabling true integration of SPECT and CT. With xSPECT technology the SPECT information is registered into the CT frame of reference laying the foundation for higher SPECT image resolution and accurate and reproducible quantitative results. The Symbia Intevo 2 has state-of-the-art SPECT and high quality two slice diagnostic CT, providing this system full functionality for all SPECT, xSPECT, and stand-alone CT diagnostic applications in Cardiology, Oncology, Neurology, and General Nuclear Medicine.
1	<b>Additional System Manuals</b> Additional user manual for the above selected MI system.
2	<b>Low Profile 3/8" Detectors</b> The low profile high resolution, digital detector assembly includes a .95 cm (3/8 in.) thick NaI (TI) crystal.
1	<b>Caudal Tilt</b> Caudal tilt on Detector 2 allows for precise positioning of static and dynamic acquisitions.
2	<b>Low_Energy_Hi_Res Collimator Symbia</b> Low energy (140 keV), high resolution, parallel hole collimator
1	<b>Pinhole Collimator Symbia</b> Pinhole collimator with a 4mm aperture
1	<b>6MM APERTURE</b> The 6 mm aperture is a high sensitivity insert for the pinhole collimator.
1	<b>IQ-SPECT</b> IQ-SPECT is a unique ultra-fast cardiac solution option for general purpose SPECT systems that enables a selection of optimized protocols: - 4 minutes using standard dose - 8 minutes using half dose - 16 minutes using only a quarter of the dose
1	<b>Symbia Productivity Pkg - Seismic</b> The productivity package automates collimator exchange and quality control increasing the productivity of the

Qty	Item Description
	Symbia Intevo and Evo camera systems.
	The Productivity Package Seismic Kit retains the collimators in the Integrated Collimator Changer in compliance with local earthquake requirements.
1	<b>AQC Web Based Training</b> AutoQC web based training is available on the Siemens training website.
1	<b>AutoQC Source Registration Kit</b> Source registration kit for Symbia Automatic Quality Control option. This kit contains information on updating site radioactive materials license, contact information for source vendor, and user instructions.
1	<b>AutoQC source kit</b> This source kit contains includes 1 - Gd-153 line and 1 - Co-57 point source required for the automatic quality control option.
1	<b>Symbia Collimator Cart</b> The collimator cart is designed to hold extra collimators and allows collimator exchange without pivoting the bed.
1	<b>Dedicated Reconstruction System</b> This high performance workstation is a state-of-the-art 64-bit computer architecture capable of handling high resolution data without impeding workflow. This workstation is seamlessly connected to the acquisition console by allowing the user to perform advanced reconstructions from the acquisition console.
1	<b>xSPECT Quant Tc99m</b> xSPECT Quant is the first and only truly quantitative solution for Tc99m SPECT imaging. This unique advanced reconstruction technique enables absolute quantification of disease uptake that is both accurate and reproducible.
1	<b>xSPECT Bone Bundle</b> Advanced bone imaging reconstruction software that uses the CT as the frame-of-reference for the image reconstruction enabling CT-like anatomical clarity and resolution.
1	<b>xSPECT Quant Calib/Peaking Source</b> This source kit contains includes one 111 MBq (3.0 mCi) precision Co-57 point source required for calibrating the xSPECT Quant Tc99m option and one 1.85 MBq (50 µCi) Co-57 point source required for peaking the camera system.
1	<b>xSPECT Quant Source Registration</b> Source registration kit for Symbia Intevo Quantitative Tc99m option. This kit contains information on updating site radioactive materials license, contact information for source vendor, and user instructions.
1	<b>Internal ECG for Symbia</b> The internal ECG gating system provides ECG triggering for the nuclear subsystem for nuclear cardiology examinations. In addition, for Symbia Intevo Excel, 2, 6 and 16, and T2, T6, and T16 cameras, the internal ECG gate provides ECG triggering to the CT subsystem for CT applications that require ECG gating.  The ECG gate is built into the Symbia patient bed and is controlled by the Symbia acquisition workplace. The leads are AHA (American standard) color coded. They connect near the head of the patient bed and travel with patient, thus never interfering with scanning.  The ECG waveform is displayed on the touch-screen Patient Positioning Monitor.
1	<b>Under Floor PHS Cable</b> Kit for routing the cable between patient bed and the Symbia Intevo or T series gantry under the floor.
1	<b>PHS Extended Pivot</b> The PHS extended pivot option extends the range of pivot for the patient bed in gurney mode.
1	<b>Extra Hand Controller</b> This option provides an extra hand controller for the Symbia Intevo and T series scanners.

Qty	Item Description
1	<p><b>Organ Processing for Symbia</b> This upgrade will add organ processing capabilities to your acquisition workplace.</p>
1	<p><b>Planar 1/2 Time Imaging</b> Planar 1/2 Time Imaging provides shortened Planar acquisition times.</p>
1	<p><b>Cardiology Engine 4DM</b> The Cardiology Engine Corridor4DM assists in the diagnosis and quantitative assessment of coronary artery disease by enabling the visualization of SPECT studies as well as quantified perfusion assessment.</p>
1	<p><b>Advanced 3D Features</b> The Advanced 3D Features Image Fusion package includes the 3D package, the Image Fusion package, and Automatic Image Fusion functionality.</p>
1	<p><b>Remote Diagnostic Services</b> Siemens Remote Services. A broadband VPN connection is required for full remote service functionality and optimal system uptime.</p>
1	<p><b>Seismic Kit</b> The Symbia seismic kit anchors the Symbia gantry and bed in compliance with local seismic requirements.</p>
1	<p><b>Symbia T Series US Installation</b> This option includes the mechanical installation of the Symbia Intevo or T series scanner system.</p>
1	<p><b>Initial onsite training 32 hrs</b> Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	<p><b>MI_SYMB_FOLLOWUP</b> Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	<p><b>CT Cross Trainer (Printed Self Study)</b> CT Cross Trainer printed self study materials for (1) imaging professional. These materials will provide the user with basic CT knowledge by testing the participant periodically. Successful completion of the self study program will provide the participant with CE credits. CT Cross Trainer printed self study materials for (1) imaging professional. These materials will provide the user with basic CT knowledge by testing the participant periodically. Successful completion of the self study program will provide the participant with CE credits. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>
1	<p><b>MI SPECT Project Management</b> A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemens equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.</p>
1	<p><b>Additonal onsite training 12 hours</b> Up to (12) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from date of purchase order. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>

**Qty**

**Item Description**

1

**Low Contrast CT Phantom & Holder**

1

**NEMA\_XR-29 Standard**

This system is in compliance with NEMA XR-29 Standard Attributes on CT Equipment Related To Dose Optimization and Management, also know as Smart Dose

## OPTIONS for Symbia Intevo 2

All items listed below are OPTIONS and will be included on this system ONLY if initialed: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Item Description
2	<b>Medium Energy Collimator Symbia</b> Medium energy (300 keV), parallel hole collimator

# Detailed Technical Specifications

## Symbia Intevo 2

/ Product	Description
Symbia Intevo 2	<p>The Symbia Intevo 2 camera system consists of the following integrated features:</p> <ul style="list-style-type: none"> <li>- Gantry</li> <li>- Patient Bed</li> <li>- Acquisition Workplace</li> <li>- SPECT Acquisition Features</li> <li>- CT Acquisition Features</li> </ul> <p><b><u>Gantry</u></b></p> <p>The gantry has two Variable Angle SPECT detectors and an open design with a 70 cm (27.6 in.) patient opening. The two low profile digital SPECT detectors can be configured at 76° or 90° for cardiac applications and at 180° or numerous other configurations for all other whole body and general protocols. The unobstructed gantry base permits planar imaging of seated and standing patients and patients on wheelchairs, or on standard imaging tables, gurneys and hospital beds. Optional caudal tilt of one detector allows for optimum detector positioning of static and dynamic acquisitions. The Ultra Fast Ceramic multislice spiral CT detector rotates at 75 RPM (0.8 sec per revolution).</p> <p>The gantry supports circular and non-circular orbits. Autocontour, with infrared real-time body contouring, is a standard component which minimizes patient to collimator distance to 1.2 cm (0.45 in.) in Whole Body and SPECT non-circular orbit acquisition modes.</p> <p>All motorized motions of the system are controlled from hand controller which can be plugged into either side of the gantry.</p> <p>The Patient Positioning Monitor is a touch screen flat panel which can be rotated for a wide range of user access and visibility. It is used for the following functions:</p> <ul style="list-style-type: none"> <li>- Patient positioning with window and persistence adjustment</li> <li>- Acquisition parameter display (elapsed time, time remaining, view number, count rate, etc.)</li> <li>- Camera information (detector and bed positions)</li> <li>- Gantry control (reconfiguration, collimator change, offset zoom, and adjusting the CT acquisition limits.)</li> </ul> <p>A fully integrated source holder is provided for quick and convenient quality control.</p> <p><b><u>Patient Bed</u></b></p> <p>The patient-oriented design of the imaging bed consists of 35.6 cm (14 in.) wide and 15 mm (0.6 in.) thin, carbon fiber pallet, supporting patient weights up to 227 kg (500 lbs). Minimum bed height is 53 cm (21 in.) for easy patient access. Programmable table positions for wheelchairs and gurneys minimize the transport efforts of patients and staff. Integrated rulers on each side of the patient bed allow for quick whole body set up. The bed also provides automatic, uninterrupted table feed for multi-rotation continuous CT volume scanning The patient bed can be easily pivoted to the side for rail-free access of sitting/standing patients, wheelchairs, imaging tables, gurneys and hospital beds.</p> <p><b><u>Acquisition Workplace</u></b></p>

Product	Description
<p data-bbox="131 464 269 491"><i>(Continued)</i></p> <p data-bbox="131 520 318 548"><b>Symbia Intevo 2</b></p>	<p data-bbox="436 489 1474 590">The syngo-based high performance workstation provides a multi-modality graphical user interface, keyboard and mouse. SPECT and CT acquisition, quality control, and display are integrated in a single workplace. Workflows for a wide variety of clinical protocols are included. The workplace offers customizable displays and full DICOM archiving and printing functionality.</p> <p data-bbox="409 636 699 663"><b><u>SPECT Acquisition Features</u></b></p> <p data-bbox="436 684 704 711"><b>SPECT Acquisition Modes</b></p> <ul data-bbox="475 716 751 900" style="list-style-type: none"> <li>- Planar static and dynamic</li> <li>- Whole Body</li> <li>- SPECT</li> <li>- Gated SPECT</li> <li>- Dynamic SPECT</li> <li>- Whole Body SPECT</li> </ul> <p data-bbox="436 924 605 951"><b>SPECT Features</b></p> <p data-bbox="475 974 675 1001"><b>Workflow Features:</b></p> <p data-bbox="513 1001 1479 1071">The system combines acquisition, post-processing (optional), and display into user customizable workflows that automate many clinical routines, remembering parameters for each clinical protocol, the workflow will automatically print, archive, and distribute your results to other devices on your network.</p> <p data-bbox="475 1094 638 1121"><b>Quality Control:</b></p> <p data-bbox="513 1121 1479 1190">Automatic and manual motion correction features aids in the improvement of the quality of the acquired images. Besides correcting for motion, gated studies can be beat normalized and quality control images such as sinograms and linograms created to document the results.</p> <p data-bbox="475 1213 631 1241"><b>3D Orientation:</b></p> <p data-bbox="513 1241 1479 1310">Reorient acquired SPECT volumes interactively to achieve the desired image orientation. Cardiac and general orientations are supported. If desired, the orientation applied to one volume can be automatically applied to up to 3 additional volumes.</p> <p data-bbox="475 1333 675 1360"><b>Image Registration:</b></p> <p data-bbox="513 1360 1479 1430">Multiple techniques provide accurate registration of acquired images including translation and rotation in three primary planes, optional automatic registration and landmark registration. The choice of output matrix size is a standard feature.</p> <p data-bbox="475 1453 638 1480"><b>Reconstruction:</b></p> <p data-bbox="513 1480 1479 1549">The reconstruction engine supports up to 5 multi-isotope studies concurrently. Standard SPECT as well as wholebody, dynamic and gated cardiac volumes can be created. Advanced techniques that provide high image quality come standard with our system:</p> <ul data-bbox="513 1583 1479 1908" style="list-style-type: none"> <li>- <u>xSPECT Iterative Reconstruction</u> The xSPECT ordered-subset conjugate-gradient reconstruction algorithm uses xSPECT technology to register the SPECT information into the CT frame of reference laying the foundation for higher SPECT image resolution with xSPECT Bone (purchasable option) and accurate and reproducible quantitative results with xSPECT Quant Tc99m (purchasable option).</li> <li>- <u>Flash Iterative Reconstruction</u> Flash 3D is a 3D iterative image reconstruction solution which offers the best reconstruction resolution in the market today following NEMA requirements. Flash 3D reconstruction uses a measured 3D collimator beam model in the iteration process. Correct modeling of the collimator distributes the activity over the slices for more accurate reconstruction. With Flash, the spatial resolution of the collimator is modeled to maintain the precise shape of the lesion. As a result, images are reconstructed with more counts in the correct volume, increasing image contrast. The</li> </ul>

Product	Description
<p><i>(Continued)</i></p> <p><b>Symbia Intevo 2</b></p>	<p>key components behind Flash 3D technology are:</p> <ul style="list-style-type: none"> <li>- Ordered Subset Expectation Maximization (OSEM) reconstruction algorithm using 3D collimator modeling to increase resolution and decrease noise, while maintaining the exact shape of organs and lesions, when compared to filtered back projection reconstruction.</li> <li>- CT Attenuation Correction that creates very precise attenuation maps from the high quality CT data to correct for attenuation and increase reading accuracy.</li> <li>- Scatter Correction that uses patient specific scatter projection estimates to form a generalized dual-or triple energy window method to compensate for scatter during the iterative reconstruction process.</li> </ul> <p><b><u>CT Acquisition Features</u></b></p> <p><b>CT Acquisition Modes</b></p> <ul style="list-style-type: none"> <li>- Topogram, scanning perspectives: anterior-posterior (ap), posterior-anterior (pa), lateral (lat)</li> <li>- Spiral CT, continuous volume scanning technique with uninterrupted table feed in the multi-rotation mode</li> <li>- Sequential CT, incremental, slice-by-slice imaging mode with no table movement during data acquisition</li> </ul> <p><b>CT Features</b></p> <p><b>CARE Dose 4D:</b>  Care Dose 4D automatically determines the minimal x-ray dose level needed to obtain optimal image quality, for all scan modes. The initial or starting tube current for every axial slice position is determined from the topogram image. Then, during the data acquisition for each axial slice, the x-ray attenuation values are closely monitored and the tube current is adjusted, on a real time basis, to optimize the x-ray dose level for the specific organs and anatomy in the x-ray path.  Several clinical benefits are achieved with CARE Dose 4D:</p> <ul style="list-style-type: none"> <li>- Significant x-ray dose reduction (up to 68 %) possible for all body regions scanned compared with standard sequence or spiral scanning</li> <li>- Consistent, optimal image quality with the x-ray dose level unique for every patient and for every anatomical region</li> <li>- Thinner axial slices and/or longer scan ranges possible because of reduced tube loading</li> <li>- Ultra-low dose examinations for pediatric patients</li> </ul> <p><b>SureView™ – Multislice Image Reconstruction System</b></p> <ul style="list-style-type: none"> <li>- Excellent Image Quality and no slice broadening at any pitch – IQ is kept constant for all scan speeds, independent of the selected range and scan time.</li> <li>- Up to 20% dose savings in spiral mode.</li> </ul> <p><b>Asynchronous Recon:</b>  Asynchronous Recon allows for multiple image reconstructions and reformats, parallel to scanning. With this feature, up to eight reconstruction job requests can be loaded into a scan protocol. Immediately upon completion of the scan acquisition, these reconstruction jobs are automatically executed in the background without delaying the start of next patient examination.</p> <p><b>Image reconstruction:</b>  Reconstruction using raw data zoom with the possibility of freely selecting the image center either before scanning (prospectively) or retrospectively.</p> <p><b>Image display:</b>  CT value scale for window setting -1024 to +3071 HU. For very dense objects the CT value scale can be</p>

Product	Description
<p><i>(Continued)</i></p> <p><b>Symbia Intevo 2</b></p>	<p>extended from -10240 to +30710 HU.</p> <p><b>Multiplanar Reconstruction (MPR)</b>  Real-time MPR for real-time reconstruction of secondary slices.  Slice orientation: coronal, sagittal, irregular as well as multi-planar with SIR and Oblique. Cutlines can be determined using the reference tomogram or in sagittal reformatted images (SRI). 512 x 512 reconstruction matrix.</p>
<p><b>Low Profile 3/8"" Detectors</b></p>	<p>Symbia utilizes energy independent low profile digital Foresight detectors.</p> <p>Detector assembly technical specifications:</p> <ul style="list-style-type: none"> <li>- True rectangular FOV of 38.7 x 53.3 cm (15.25 x 21 in.)</li> <li>- 59 photomultiplier tubes – 53, 7.6 cm (3 in.) and 6, 5.1 cm (2 in.) diameter tubes</li> <li>- .95 x 59.1 x 44.5 cm (3/8 x 23 x 17.4 in.) NaI (TI) crystal material</li> </ul> <p>The Low Profile Digital Foresight Detector features:</p> <ul style="list-style-type: none"> <li>- Balanced performance between energy resolution and spatial resolution</li> <li>- One, 10-bit high-speed flash ADC per PMT</li> <li>- Variable PMT selection ensures high resolution for all multi-energy and multi-peak applications</li> <li>- Optimized dynamic digital integration time to improve high count rate capability</li> <li>- Individual PMT pile-up correction for improved performance at high count rates</li> <li>- Energy independence maintains clinical performance at all energies including multi-peak and dual isotope studies</li> <li>- Location independence maintains consistent spatial resolution across the field of view</li> <li>- Crystal variation correction for optimal uniformity and linearity across all energies</li> </ul> <p>Single source (Co-57 or Tc-99m) tunes the detector for all energies</p>
<p><b>Low_Energy_Hi_Res Collimator Symbia</b></p>	<p>The low energy high resolution collimator has the following technical specifications:</p> <ul style="list-style-type: none"> <li>- 148,000 hexagonal holes</li> <li>- Sensitivity: 202 cpm/microCurie</li> <li>- Resolution: 7.5mm at 10 cm</li> <li>- Weight: 22 kg (49 lbs)</li> </ul>
<p><b>Pinhole Collimator Symbia</b></p>	<p>The pinhole collimator with 4 mm aperture has the following technical specifications:</p> <ul style="list-style-type: none"> <li>- 1 round hole</li> <li>- Sensitivity: 123 cpm/microCurie for 99m Tc</li> <li>- Resolution: 6.6 mm at 10 cm</li> <li>- Weight: 80 kg (177 lbs)</li> </ul> <p>SPECT imaging with a pinhole collimator is not allowed.</p> <p>The pinhole collimator occupies the upper 2 locations on a collimator cart; Therefore, only an additional 2 collimators (1 pair) can be stored on the same cart.</p>
<p><b>6MM APERTURE</b></p>	<p>The 6 mm aperture has the following technical specifications:</p> <ul style="list-style-type: none"> <li>- Sensitivity: 271 cpm/microCurie for 99m Tc</li> <li>- Resolution 9.5 mm at 10 cm</li> </ul>
<p><b>IQ-SPECT</b></p>	<p>IQ-SPECT is a unique ultra-fast cardiac solution option for general purpose SPECT systems. The foundation for</p>

Product	Description
<p><i>(Continued)</i></p> <p><b>IQ-SPECT</b></p>	<p>IQ-SPECT relies on 3 key technological advancements:</p> <ul style="list-style-type: none"> <li>- SMARTZOOM collimators</li> <li>- Cardio-centric orbit</li> <li>- Advanced reconstruction</li> </ul> <p><b><u>SMARTZOOM collimators</u></b> The SMARTZOOM collimator is capable of magnifying the heart and capture up to 4 times higher sensitivity than conventional LEHR collimators.</p> <p><b><u>Cardio-Centric Orbit</u></b> An intelligent Cardio-Centric Orbit is used to maintain the heart at the center of the SMARTZOOM field of view for every view of the acquisition.</p> <p><b><u>Advanced Reconstruction</u></b> The advanced reconstruction method fully models the collimator and the camera system while performing distance-dependent isotropic resolution recovery, CT based attenuation compensation (Symbia T, and Symbia Intevo series scanners), and energy window based scatter correction.</p> <p>The entire IQ-SPECT solution was carefully designed to address the needs of the clinic, with a selection of optimized protocol options:</p> <ul style="list-style-type: none"> <li>- 4 minutes using standard dose</li> <li>- 8 minutes using half dose</li> <li>- 16 minutes using only a quarter of the dose</li> </ul>
<p><b>Symbia Productivity Pkg - Seismic</b></p>	<p>The productivity package includes the following features:</p> <ul style="list-style-type: none"> <li>- Integrated Collimator Changer</li> <li>- Automatic Collimator Exchange</li> <li>- Automatic Quality Control</li> </ul> <p><b>Integrated Collimator Changer</b></p> <p>Innovative collimator exchange system that is mounted beneath the patient bed. Saves time and effort when collimators. Holds two sets of low or medium energy collimators including SMARTZOOM collimators.</p> <p><b>Automatic Collimator Changer</b></p> <p>Fully automated changing of collimators within the integrated collimator changer. Collimator removal or exchange is initiated from the patient positioning monitor.</p> <p><b>Automatic Quality Control</b></p> <p>Automatic quality control is performed via self-shielding Gd-153 line and Co-57 point sources. The sources are housed in the patient bed and are extended automatically as part of the camera's quality control procedures. The daily, weekly, and monthly procedures are customer scheduled and performed automatically without manual intervention.</p> <p>Included is a seismic kit that includes a bar which attaches to the front of the Integrated Collimator Changer to retain the collimators in their respective drawers in the event of an earthquake.</p>
<p><b>AutoQC source kit</b></p>	<p>The useful life of the 370 MBq (10 mCi) Gd-153 line, used for daily extrinsic floods and monthly multi-head registration procedures, is 2 years. The useful life of the 1.85 MBq (50 µCi) Co-57 point, used for intrinsic floods, is 1 year.</p>

Product	Description
<p><i>(Continued)</i></p> <p><b>AutoQC source kit</b></p>	<p>Sources that have been replaced are returned to the source vendor for disposal. Return shipment costs are not included in the purchase price.</p>
<p><b>Symbia Collimator Cart</b></p>	<p>The collimator cart is automatically clamped to the patient bed once positioned by the user. The clamping mechanism allows precise collimator exchange to occur.</p> <p>The collimator cart is designed to hold 2 sets of collimators, or 1 set in combination with a pinhole collimator.</p> <p>Due to the weight of the high energy collimators, it is recommended that an individual collimator cart containing only the 2 high energy collimators be utilized.</p>
<p><b>xSPECT Quant Tc99m</b></p>	<p>xSPECT Quant is the first and only truly quantitative solution for Tc99m SPECT imaging. This unique advanced reconstruction technique enables absolute quantification of disease uptake that is both accurate and reproducible. With xSPECT Quant quantitative values are derived automatically during the reconstruction in units of Bq/ml or SUV's. These values can be confidently compared across patients, systems and time.</p>
<p><b>xSPECT Bone Bundle</b></p>	<p>xSPECT Bone is the most advanced SPECT bone imaging reconstruction software available. It uses the CT as the frame-of-reference for image reconstruction enabling CT-like anatomical clarity and resolution. xSPECT Bone defines five tissue classes: air, adipose, soft tissue, soft bone and cortical bone. Based on attenuation coefficients each image voxel in the <math>\mu</math>-map is indexed into one of these classes. The result is a patient-specific linear zone map, which can improve image resolution. For the first time, physicians can potentially detect and distinguish between cancerous lesions and degenerative disorders and may better visualize small or low-uptake lesions thanks to a level of clarity and image detail never before experienced in nuclear medicine.</p>
<p><b>xSPECT Quant Calib/Peaking Source</b></p>	<p>The useful life of both Co-57 point sources is 1 year.</p> <p>Sources that have been replaced are returned to the source vendor for disposal. Return shipment costs are not included in the purchase price.</p>
<p><b>PHS Extended Pivot</b></p>	<p>The extended pivot increases the range from 33 degrees to 45 degrees to allow better handling of wide hospital beds.</p>
<p><b>Extra Hand Controller</b></p>	<p>The Symbia Intevo and T series scanners come standard with a single hand controller that can be plugged into either side of the gantry. This option adds an additional hand controller for added efficiency in accessing the motorized motions for the patient bed, gantry, and detectors.</p>
<p><b>Organ Processing for Symbia</b></p>	<p>Organ processing provides generic tools for the manipulation of NM images. In addition, it provides dedicated processing protocols for the many different types of exams performed in nuclear medicine departments. Features provided are:</p> <ul style="list-style-type: none"> <li>- Cardiac: Planar Gated Blood Pool, First Pass, Shunt</li> <li>- Lung: Perfusion, Ventilation, V/Q</li> <li>- Thyroid</li> <li>- Renal: GFR, ERPF, MAG3, Transplant, TER, Ace Inhibitor</li> <li>- Gastric</li> <li>- Hepatobiliary</li> <li>- Brain: Patlok, Lassen, IMP, IMP-ARG, NIMS</li> <li>- GSA Liver</li> <li>- Parathyroid: Scaled subtraction</li> <li>- Image manipulation tools: Series Filter, Series Arithmetic, Series Reformat, and Series ROI and Curve</li> <li>- Manual Fusion</li> </ul>

Product	Description
<b>Planar 1/2 Time Imaging</b>	<p>The Planar 1/2 Time Imaging package is based upon a statistical, adaptive de-noising and de-blurring process for planar imaging. It can be used to:</p> <ul style="list-style-type: none"> <li>- Shorten the acquisition time of planar imaging, and/or</li> <li>- Reduce the dose administered to the patient, and/or</li> <li>- Enhance the image quality of statistically poor imaging results</li> </ul>
<b>Cardiology Engine 4DM</b>	<p>The Cardiology Engine provides the Corridor4DM Cardiac Suite, a comprehensive set of quantitation programs for the evaluation of SPECT Myocardial Perfusion Imaging</p> <p>The Corridor4DM application includes comprehensive interactive processing and display, generation of 2D, 3D, and polar maps images, calculation of ventricular volumes, myocardial mass and ejection fraction for gated SPECT studies and utilizes gated bloodpool data to calculate left ventricular Ejection Fraction. Compare perfusion and functional polar maps to gender matched normal files, which includes additional support for attenuation correction. Also included are a normal database generator and the ability to create reports within the Corridor4DM application. The Corridor4DM application is an OEM product developed and supported by INVIA.</p> <p>Outputs include DICOM secondary capture files, result files, reports as well as the ability to generate an AVI or TIFF file.</p> <p>Supported software for Profile Reconstruction cardiac data</p> <p>Applications include: Corridor4DM Cardiac Suite</p>
<b>Advanced 3D Features</b>	<p>This package supports images from NM, PET, CT, MR and AX and features the following:</p> <p><b>3D Package</b></p> <p>Basic 3D package used to navigate through volume data and to create surface shaded and maximum intensity projection images. This package supports the following features:</p> <ul style="list-style-type: none"> <li>- Surface Shaded Display</li> <li>- Maximum Intensity Projection (MIP)</li> <li>- MPR user defined Thickness</li> <li>- Interactive 3D volume rotation</li> <li>- Interactive 3 slice display</li> <li>- Oblique cuts at any angle within the volume</li> <li>- Storage of fused results as DICOM secondary capture images</li> <li>- Region of interest punch tool</li> <li>- Curved cuts along any user defined pathway</li> <li>- Storage of 3D results</li> </ul> <p><b>Image Fusion Package</b></p> <p>Image Fusion Package for spatial alignment, superimposition, and visualization of image data of one patient where image data has been generated by different modalities. Supports optimal diagnosis by fusing the morphological with the functional information.</p> <ul style="list-style-type: none"> <li>- Easy-to-use visual alignment with 6 degrees of freedom (3X translation, 3X rotation)</li> <li>- Landmark based registration with convenient landmark editor for point-based registration using anatomical landmarks</li> <li>- Storage of transformation matrix after registration for later retrieval</li> <li>- Side by side visualization with correlated pointer and simultaneous scrolling</li> <li>- 2D alpha blending in monochrome or pseudo-color with adjustable balance between the two superimposed data sets.</li> </ul> <p><b>Automatic Image Fusion</b></p> <p>Enhances the existing Image Fusion Package with techniques for automatic image registration. Surface Matching</p>

<b>Product</b>	<b>Description</b>
<p><i>(Continued)</i></p> <p><b>Advanced 3D Features</b></p>	<p>and Mutual Information algorithms allow for mix of image registration between anatomic modalities and functional modalities.</p>
<p><b>Remote Diagnostic Services</b></p>	<p>A broadband connection is required for full remote service functionality and optimal system uptime. The Siemens Remote Service option allows for remote access to your networked workstations. Hardware may need to be purchased.</p> <p>Features include:</p> <ul style="list-style-type: none"> <li>- Image Transfer</li> <li>- Remote updates including Virus Protection</li> <li>- Error log retrieval</li> <li>- Remote Workflow revisions</li> <li>- Remote configuration</li> <li>- License management</li> <li>- Remote workstation control via netmeeting</li> </ul>
<p><b>Seismic Kit</b></p>	<p>The kit anchors the gantry and bed to the floor with the included bed tie down assembly and seismic anchor bolts for the gantry.</p>
<p><b>Symbia T Series US Installation</b></p>	<p>Installation includes:</p> <ul style="list-style-type: none"> <li>- Complete system assembly</li> <li>- Alignment</li> <li>- System startup</li> <li>- Calibrations</li> <li>- Performance verification to factory specifications</li> </ul> <p>This option is required for all US Installations</p>
<p>-</p> <p><b>Standard</b></p>	<p>This system is in compliance with NEMA XR-29 Standard Attributes on CT Equipment Related To Dose Optimization and Management, also know as Smart Dose</p>
<p><b>Medium Energy Collimator Symbia (Optional)</b></p>	<p>The medium energy collimator has the following technical specifications:</p> <ul style="list-style-type: none"> <li>- 14,000 hexagonal holes</li> <li>- Sensitivity: 275 cpm/microCurie</li> <li>- Resolution: 12.5 mm at 10 cm</li> <li>- Weight: 64 kg (140 lbs)</li> </ul>