# **AnyScan**<sup>®</sup>

triple modality molecular imaging system



The first human SPECT-CT-PET\* imager, a unique solution in the NM world



# AnyScan® New hybrid imaging system

MEDISO Medical Imaging Systems with headquarters in Budapest, Hungary is a dynamic supplier to the health care industry in the world. The company is known for researching innovative NM technologies, manufacturing systems, providing services to help customers achieve tangible, sustainable, clinical and financial outcomes.

The inventing of AnyScan® SPECT-CT-PET Multi Modality System demonstrates the commitment Mediso has made to developing leading-edge technology that is responsive to the needs of Mediso's clinical partners.

AnyScan® SPECT-CT-PET Multi Modality System delivers the current and future promise of nuclear medicine by maximizing molecular information in combination with precise anatomical detail. This technology will help our customers to spot the exact location, size, nature and extent of malignancy anywhere in the body.

AnyScan® SPECT-CT-PET triple modality system uniquely integrates Mediso's state-of-the-art new SPECT, PET and CT modules.

AnyScan\* SPECT-CT-PET Multi Modality System will serve as a key for early diagnosis and treatment for cancer, cardiac and neurological diseases. With a single scan this imaging technology quickly captures comprehensive, accurate diagnostic information both on the two-modality molecular and anatomical levels and will enable physicians to detect changes in molecular activity and verify them even before structural changes become visible.

With early and more exact diagnosis, planning of treatment becomes more effective and the efficiency of treatment can be monitored, reducing the risk of surgery. As an effect of this care of the patient will be improved.

AnyScan\* SPECT-CT-PET device is capable of high quality scans in both nuclear and radiological modalities - SPECT-PET and CT – and it will offer all the diagnostic and therapy planning and monitoring advantages for the patient reducing the number of necessary visits. Acquiring multiple studies during one appointment increases comfort and convenience for the patient.

The new imaging technology with AnyScan® SPECT-CT PET system will enable clinicians to utilize the device in five ways to perform five separate studies - SPECT-CT-PET, SPECT-CT, PET-CT, SPECT, multi-slice CT, - all with a single system.



**AnyScan**\*'s small footprint will make it possible to integrate the system into different clinical settings. In addition the flexible modular system architecture allows Mediso to offer variety of models within the **AnyScan**\* family in the future.

Owing to the modular build-up the new **AnyScan** is a flexible, variable system with easy combination of modalities. The system combinations may easily follow the needs of the NM-clinics or departments.

Several upgrade paths are available:

Starting from a standalone SPECT upgraded to SPECT-CT or SPECT-CT-PET according to the growing need for modalities.

Start with a SPECT-CT-PET to be upgraded to PET-CT and standalone SPECT for increased throughput.

**AnyScan** offers multi-slice CT configuration with speed of up to 0,4 seconds per rotation, allowing acquisition of a high quality CT scan in a few seconds. This will enable physicians to obtain a functionally accurate, anatomically precise SPECT or PET-CT study faster.

The integration of *InterView*"FUSION, Mediso's unique software platform into the AnyScan" system also offers a common intuitive user interface and enables easy access to patient data. *InterView*"FUSION, with its multimodality implementation, is uniquely suited for hybrid imaging systems like AnyScan".





# AnyScan® System introduction



#### Anyscan° a unique solution in the Nuclear Medicine

- The first triple modality human NM imaging system of the world
- Free architecture of NM and CT modalities
- Flexible system combinations due to "building block" system
- Modular flexibility with different parameters of system components
- All NM examinations performed on one equipment without patient repositioning
- Custom tailored technical parameters due to modular subsystem
- Easy (field) system upgrade
- Easy (field) quality upgrade
- Diagnostic CT capability
- Multiple upgrade paths:
  - Add- on upgrade from single unit to triple modality which covers all NM diagnostic procedures with a single device in a single room
  - Splitting upgrade from triple modality to more units in order to achieve a higher throughput of the NM department
- Made for NM departments and covers all NM procedures

## Basic system combinations











AnyScan<sup>-</sup>

AnyScan<sup>®</sup> SC

AnyScan<sup>®</sup> PC

AnyScan<sup>®</sup> S

AnyScan<sup>®</sup> C

## Upgrade paths

## Two samples from the many possible AnyScan upgrades\*

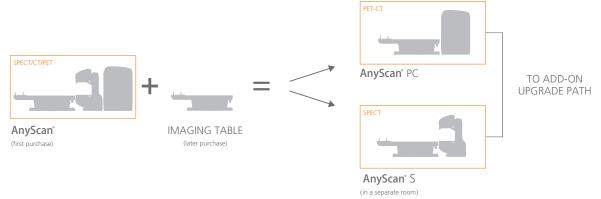
#### Add-on upgrade path for equipment that grows with the practice

- Starts with a purchase of **AnyScan**\* S (SPECT)
- With addition of a CT unit the system is upgraded to AnyScan\* SC (SPECT/CT)
- Further addition of a PET unit upgrades the system to **AnyScan**\* (SPECT/CT/PET) triple modality system and all NM examinations can be performed in the same room



#### Splitting upgrade path for increased throughput

- Starts with a purchase of **AnyScan**\* (SPECT/CT/PET) triple modality system
- When patient flow increased and require higher throughput it might be achieved by splitting the unit into an **AnyScan**\* PC (PET/CT) and an **AnyScan**\*S (SPECT) with a purchase of an additional imaging table. The **AnyScan**\*S (SPECT) can operate in a separate room, doubling the throughput of the department.



<sup>\*</sup> For investment safety upgrade paths are warranted for 10 years.

# **SPECT Component**

## Digital-Detector

The two rectangular jumbo FOV high stability detectors are characterised with high optical performance and excellent mechanical quality.

The thickness of the 585 (558) x 470 (418) mm NaI(TI) scintillation crystal is either 9.5 mm, either 12.5 mm or 15.9 mm.

There are either 60 - 48 pcs of high quantum efficiency PMT characterized by improved energy resolution, magnetic shielding and long-term stability.

The thickness of lead shielding is 12-32 mm, covering the range of high energy isotopes.

#### **Detector Electronics**

The detector electronics are built on a compact, highly integrated, one-box, easily serviceable construction without tuning potentiometers.

- 1 ADC / PMT detector electronics
- High precision preamplifier electronics
- Computer controlled PMT autotuning for fast PMT gain stabilization and adjustment
- Digital electronics assembled from parts of the latest technology
- Active high voltage bleeder with integrated HV module

#### **SPECT Gantry**

The gantry has a small footprint, it was designed with improved safety factor to ensure high stability.



# **NEMA Specifications**

Detector	HP*	UHP**	UHP** Typical		
Size of detector FOV:	530 mm x 390 mm				
Energy range:	40–600 keV				
Intrinsic energy resolution for 99mTc	9.7%	9.5%	8.9%		
Intrinsic flood field uniformity					
Differential CFOV	1.9%	1.4%	1.2%		
Differential UFOV	2.4%	1.9%	1.2%		
Integral CFOV	2.4%	1.9%	1.6%		
Integral UFOV	2.9%	2.4%	1.6%		
Intrinsic spatial resolution					
CFOV (FWHM)	3.6 mm	3.1 mm	2.9 mm		
CFOV (FWTM)	7.2 mm	6.1 mm	5.9 mm		
UFOV (FWHM)	3.7 mm	3.2 mm	3.0 mm		
UFOV (FWTM)	7.4 mm	6.2 mm	5.9 mm		
Intrinsic spatial linearity					
Differential CFOV	0.18 mm	0.09 mm	0.03 mm		
Differential UFOV	0.20 mm	0.10 mm	0.04 mm		
Absolute CFOV	0.38 mm	0.28 mm	0.14 mm		
Absolute UFOV	0.40 mm	0.30 mm	0.18 mm		
Max. count rate with full correction	> 0.45	> 0.49 Mcps			
System spatial resolution with					
LEHR collimator (FWHM)	7.3 mm	7.2 mm	6.9 mm		
(FWTM)	13.9 mm	13.4 mm	12.8 mm		

HP\*= High Performance UHP\*\*= Ultra High Performance



# **SPECT Component**

#### Collimators

Wide scale of high quality collimators are available for the AnyScan® camera. All collimators are made of high quality Micro-linear or Micro-cast lead. The extremely precise level of manufacturing ensures excellent image quality.

Removable infra-red auto body contour sensors set on the collimator touch plates ensure safety for the patient and improves the reproduction quality of a repeated examination.

Name	Hole Length (mm)	Hole Size (mm)	Septal Thickness (mm)	Nominal Energy (keV)	Septal Penetration at Nominal Energy	Resolution at 10 cm (FWHM mm)		Sensitivity (cpm/µCi) ±7%	
						Geometric	System	Geometric	System
LEHS (1)	26	2.5	0.30	140	2.1%	13.7	14.1	1000	840 (7)
LEGP (2)	35	1.9	0.20	140	1.1%	8.2	8.9	320	260 (7)
LEHR (3)	35	1.5	0.16	140	1.0%	6.5	7.4	180	160 (7)
LEUHR (4)	40	1.4	0.16	140	0.4%	5.4	6.5	133	100 (7)
MEGP (5)	35	2.5	1.2	300	1.9%	11.1	11.6	330	200 (9)
HEGP (6)	55	3.4	1.6	364	5.9%	11.6	12.2	340	75 (8)
		4				7.2	7.3	70	(10)
НЕРН	~200	6	-	364	-	10.2	10.2	14	10)
		8				13.2	13.2	23	(10)

Mediso 02/2008. Specifications are subject to change.

- (1) Low Energy High Sensitivity collimator
- (2) Low Energy General Purpose collimator (3) Low Energy High Resolution collimator
- (4) Low Energy Ultra High Resolution collimator (5) Medium Energy General Purpose collimator
- (6) High Energy General Purpose collimator
- (7) Measured with 99mTc in 20%-window (8) Measured with <sup>131</sup>I in 20%-window
- (9) Measured with <sup>67</sup>Ga in 20%-window
- (10) Measured with <sup>131</sup>I in 20%-window



# Multislice CT Component

The **AnyScan** system combines the power of nuclear medicine with the precision of **16 slices** fast helical CT technology. **AnyScan** SCT module supplies precise data for the attenuation correction and provides excellent diagnostic imaging capability. The CT-module consists of a high resolution ceramic detector. The rotation speed is up to 0.4 sec with a 360-degree rotation.

\*optional

#### CT Gantry

- Patient Aperture: 70 cm - Scan Field of View: 50 cm
- Acquisition Times (360°): 0.4 (optional), 0.5, 0.7, 1, 1.5 and 2 sec.

#### X-ray Generator

- Power: 60 kW

#### X-ray Tube

- Highest X-Ray Tube Voltage: 140 kVp - Highest X-Ray Tube Current: 500 mA

#### X-ray Detector

- Ceramic Detectors
- Number of Detector Elements: 24 x 896
- Number of DAS Rows: 16
- Detector Width (Z Dimension): 20 mm

#### Image Reconstruction

- Reconstruction Matrix: 512 x 512

#### Scan Parameters

- Acquired Slice Thickness: 16 rows of 0.625 mm or 1.25 mm
- Displayed Slice Thickness: 0.625, 1.25, 2.5, 3.75, 5, 7.5, 10 mm



# PET Component

The PET module is carefully designed to integrate with the other modalities of **AnyScan**\*. The high sensitivity and excellent resolution facilitate fast examination process and accurate clinical diagnosis.

- Molecular PET imager module with high resolution LYSO detector technology
- Independent gantry under common PET/CT gantry-cover
- 70 cm gantry bore diameter
- 90.2 cm ring diameter
- High precision digital imaging electronics
- High spatial resolution
- Excellent volume sensitivity
- FBP-SSRB, 3DOSEM, 3DML reconstruction
- Different FOV options for increased sensitivity
- The selected FOV may be extended with a later purchase (Field upgradable)



# Specification of PET Module

Crystal LYSO  Number of detectors  Crystal size  mm  3.9x3.9x20  Number of pixels  26448  39672  Number of PMT  288  432  Transversal resolution 1cm (NEMA 2001)  mm  4.1  Transversal resolution 10cm (NEMA 2001)  Axial resolution 1cm (NEMA 2001)  Axial resolution 10cm (NEMA 2001)  Axial resolution 10cm (NEMA 2001)  Axial FOV  cm  15.2  23.0  Transaxial FOV  cm  55  System sensitivity  cps/kBq  4.3  8.1  Coincidence window  nsec  5  Peak noise equivalent count rate  kcps  100  150  Electronic timing resolution (ps)  garteyldynamic PET, HW  ECG+sw  FCG+sw  ECG+sw	Description	Unit	Basic Field	Extended Field
Crystal size         mm         3.9x3.9x20           Number of pixels         26448         39672           Number of PMT         288         432           Transversal resolution 1cm (NEMA 2001)         mm         4.1           Transversal resolution 10cm (NEMA 2001)         mm         4.9           Axial resolution 10cm (NEMA 2001)         mm         5.1           Axial resolution 10cm (NEMA 2001)         mm         5.1           Axial FOV         cm         15.2         23.0           Transaxial FOV         cm         55           System sensitivity         cps/kBq         4.3         8.1           Coincidence window         nsec         5           Peak noise equivalent count rate         kcps         100         150           Electronic timing resolution (ps)         ps         100         6antry aperture         cm         70           Ring diameter         cm         90.2         90.2         60.2	Crystal		LYSO	
Number of pixels  Number of PMT  288  432  Transversal resolution 1cm (NEMA 2001)  Transversal resolution 10cm (NEMA 2001)  Axial resolution 1cm (NEMA 2001)  Axial resolution 10cm (NEMA 2001)  Mm  4.2  Axial resolution 10cm (NEMA 2001)  Mm  5.1  Axial FOV  cm  15.2  23.0  Transaxial FOV  cm  55  System sensitivity  cps/kBq  4.3  8.1  Coincidence window  nsec  5  Peak noise equivalent count rate  kcps  100  Electronic timing resolution (ps)  gantry aperture  cm  70  Ring diameter	Number of detectors		24	
Number of PMT 288 432  Transversal resolution 1cm (NEMA 2001) mm 4.1  Transversal resolution 10cm (NEMA 2001) mm 4.9  Axial resolution 1cm (NEMA 2001) mm 5.1  Axial resolution 10cm (NEMA 2001) mm 5.1  Axial FOV cm 15.2 23.0  Transaxial FOV cm 55  System sensitivity cps/kBq 4.3 8.1  Coincidence window nsec 5  Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	Crystal size	mm	3.9x3.9x20	
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Axial resolution 10cm (NEMA 2001) mm 5.1  Axial FOV cm 15.2 23.0  Transaxial FOV cm 55  System sensitivity cps/kBq 4.3 8.1  Coincidence window nsec 5  Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	Transversal resolution 10cm (NEMA 2001)	mm	4.9	
Axial FOV cm 15.2 23.0  Transaxial FOV cm 55  System sensitivity cps/kBq 4.3 8.1  Coincidence window nsec 5  Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	Axial resolution 1cm (NEMA 2001)	mm	4.2	
Transaxial FOV cm 55  System sensitivity cps/kBq 4.3 8.1  Coincidence window nsec 5  Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	Axial resolution 10cm (NEMA 2001)	mm	5.1	
System sensitivity cps/kBq 4.3 8.1  Coincidence window nsec 5  Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	Axial FOV	cm	15.2 23.0	
Coincidence windownsec5Peak noise equivalent count ratekcps100150Electronic timing resolution (ps)ps100Gantry aperturecm70Ring diametercm90.2	Transaxial FOV	cm	55	
Peak noise equivalent count rate kcps 100 150  Electronic timing resolution (ps) ps 100  Gantry aperture cm 70  Ring diameter cm 90.2	System sensitivity	cps/kBq	4.3	8.1
Electronic timing resolution (ps)  Gantry aperture  Cm  70  Ring diameter  Cm  90.2	Coincidence window	nsec	5	
Gantry aperture cm 70 Ring diameter cm 90.2	Peak noise equivalent count rate	kcps	100	150
Ring diameter cm 90.2	Electronic timing resolution (ps)	ps	100	
taing didirect.	Gantry aperture	cm	70	
Gated/dynamic PET_HW/	Ring diameter	cm	90.2	
Gated/dynamic FET 11W	Gated/dynamic PET HW		ECG+sw	
Number of gated PET phases max. 64	Number of gated PET phases	max.	64	



# **Shared Components**

## Triple Modality Imaging Table

The carbon fiber dual section imaging table can be extended extremely long, ensuring safe support for corpulent patients as well.

- Intelligent CAN connected industry standard interface to gantry
- Dual tabletop
- Motorized vertical movements
- Motorized whole body motion
- Low attenuation (< 8%) carbon fiber pallet
- Horizontal moving range is 360 cm
- Height of the patient pallet is variable between 45-85 cm, optionally 95 cm
- Max. 229 kg patient weight
- Accessories: arm-holder for WB-, arm-head-holder for heart-, head holder for brain examinations



#### Acquisition Console

Gantry installed acquisition workstation with 17" touch screen monitor for gantry and patient positioning

- Intel® Core™ i7 2.8 GHz quad-core processor
- 6 GB RAM
- 4 TB hard disk drive
- CD-DVD-RW drive
- keyboard, mouse
- full DICOM 3.0 compatibility (send/ receive, print, query/retrieve)
- 24" high resolution (1920x1200) and 17" (1280x1024) touch screen LCD monitor
- integrated Gigabit Ethernet controller

Integrated SPECT data acquisition module

- 64 independent energy channels
- Multi-channel analyser up to 1024 channels
- 4096 x 4096 pixel image processing
- Digital corrections:
  - Direct addressing TS® simulation linearity correction with FOV increasing technology
  - Improved energy correction
  - Uniformity correction without count rate loss
  - Automatic real time uniformity cross-correction for the different collimators

#### Multimodality Processing Workstation

Dedicated Nuclear Medicine (SPECT, PET) and CT + MRI workstation with *InterView* FUSION software package running on Win7 64 bit Ultimate OEM operating system with dual monitor

- Intel® Core™ i7 2.8 GHz quad-core processor
- 12 GB RAM
- 4 TB hard disk drive
- CD-DVD-RW drive
- keyboard, mouse
- full DICOM 3.0 compatibility (send/receive, print, query/retrieve)
- 30" ultra high resolution (2560x1600) and 20" (1600x900) LCD monitor
- integrated Gigabit Ethernet controller

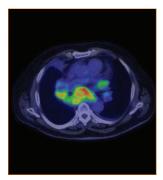
#### **SPECT Processing Workstation**

Dedicated SPECT workstation for SPECT, WB and PLANAR examination with *InterView* XP software package

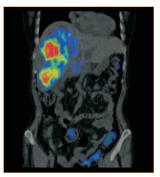
- Intel® Core™ i7 2.8 GHz quad-core processor
- 6 GB RAM
- 4 TB hard disk drive
- CD-DVD-RW drive
- keyboard, mouse
- full DICOM 3.0 compatibility (send/ receive, print, query/retrieve)
- 24" high resolution (1920x1200) LCD monitor
- integrated Gigabit Ethernet controller

## Multimodal Software

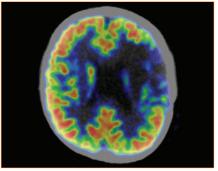
# The nuclear studies are right there. Anytime. From Anywhere. The software tools that drive the solutions...



18FDG chest PET/CT



111In-Octreotide abdominal SPECT/CT

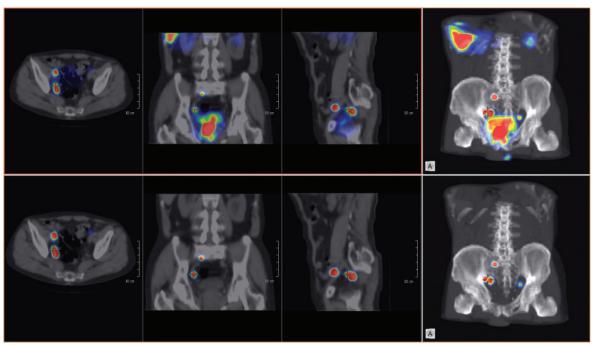


18FDG brain PET/CT

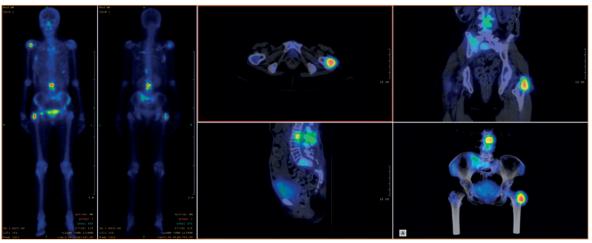
#### *InterView* FUSION

Complete multimodality (SPECT-CT-PET-MRI) evaluation software

- Dual / triple / quad fusion display of multi-modality studies (SPECT-CT-PET-MRI)
- Registration of images (automatic affine, automatic nonlinear, semi-automatic landmark nonlinear and affine manual)
- Segmentation of images (sentinel lymph node, bone, heart, ROI based, cropping, etc.)
- Arithmetic operations between images (add, subtract, multiply, absolute difference, min, max, mean)
- Extended measurement functionality;
  - Many kinds of definable ROIs and VOIs (automatic statistics computing)
  - DICOM RT support
  - Excel compatible calculation board definition / save / load for daily QC and research
- Automatic loading of images in predefined and custom layouts
- (easy custom layout creation, viewer resizing by splitters, dockable toolbox placing, font setting)
- Flexible data handling; can load more studies
- Object managing tool (drag&drop images on demand)
- Support of DICOM services and DICOM servers (loading and saving)
- Multiple types of viewers; each type for different needs (eg. movie from slices, tiled view)
- Multi-workspace support
- MIP creation from volumes (intelligent MIP viewer)
- Volume rendering of volumes
- Toolboxes for each group of functionality
- Viewer context menu and mouse modes for easy handling of functionalities
- Global hotkeys for quick access of often used functionalities (positioning, windowing, etc.)
- Zoom to viewer function: bringing it to full screen on a new workspace
- Set of handful tools for doctors
- (slice merging, cursor synchronization of comparative studies, fusion display change by hotkey, preset CT windows etc.)
- Creating reports consisting of viewers (print, burn CD, create PDF or secondary capture DICOM format from it)
- Film or paper based report, DICOM printing
- Handling PET specific issues (eg. quick AC/NonAc change, SUV modes)
- Using the 4 Mpixel and 1.3 Mpixel (30" and 19") monitors optimally; most of the screen space is used by the images (auto-hidable toolboxes and mouse modes do not occupy place)



Top row: Original prostate SLN SPECT/CT
Bottom row: SLN SPECT/CT after automatic sentinel lymph node segmentation



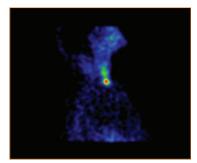
<sup>99m</sup>Tc MDB Whole Body bone SPECT AP - PA acquititions and their corresponding reconstructed SPECT/CT fusion with spatially aligned synchronized cursors

### **SPECT Software**

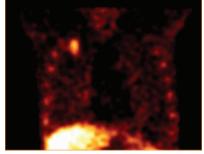
#### *InterView*™XP

Dedicated post processing NM software for Planar, SPECT, Whole Body studies and CT-NM fusion, runs under MS Windows.

- Multi-format image presentation in excellent quality
- Highly automated processing tools
- User-friendly automatic workflow guiding
- User configurable procedures
  - Different types of SPECT reconstruction algorithms suite various clinical requirements (Back Filtered or Iterative: OSEM, MOSEM, ML)
- Image filtering with various filters (Fourier-based and others)
- Several tools for image manipulation and correction
- Organ-specific dedicated procedures for SPECT, planar, gated or dynamic images
- Cardiac SPECT
- Cardiac Stress/Rest evaluations: <sup>201</sup>Tl stress-redistribution, <sup>99</sup>Tcm Stress-Rest, etc.
- ECG gated blood-pool SPECT and perfusion SPECT
- Brain SPECT, Brain Stress/Rest SPECT, Quantitative Brain region analysis
- User configurable SPECT Procedures
- Whole Body Studies
- 3D views of reconstructed images
- Comprehensive planar processing package for the majority of organs
- Co-registration of reconstructed images with CT images
- Data exchange with standard-compliant nuclear medicine workstations using DICOM protocol



99mTc-MIBI SPECT

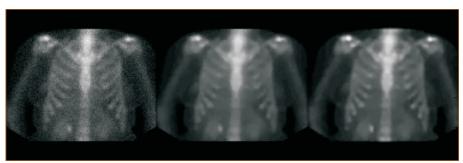


<sup>111</sup>In-depreotide SPECT

#### *InterView* <sup>™</sup>CLEAR

Resolution recovery package for SPECT and Planar studies

- Improved image quality by compensating for distance dependent blurring
- Enable to reduce patient dose or acquisition time
- Visual acuity for SPECT and planar images correspond to  $\ensuremath{\mathsf{PET}}$

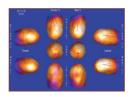


Raw - wavelet denoised - resolution recovery; @ acq. time = 240 sec

# **Dedicated Cardiac Packages**

## **Emory Cardiac Toolbox**

The software package provides physicians with a tool that processes, displays, interprets and analyzes cardiac PET and SPECT studies. HeartFusion™ is able to fuse CT coronaries with perfusion 3D display and provides vessel cross sectional area.

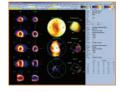


#### Cedars Sinai

Dedicated evaluation package to analyze quantitative blood-pool SPECT, cardiac perfusion and gated SPECT and PET studies and compare to normal databases.

#### **Cedars Sinai Quantitative Gated SPECT**

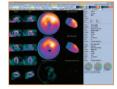
- Automated processing of myocardial perfusion SPECT and gated SPECT data
- Left ventricular ejection calculation
- 3D beating image displays
- Volume curves and polar maps



#### **Cedars Sinai Quantitative Perfusion SPECT**

Standalone interactive application for :

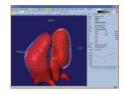
- Automatic segmentation
  - Quantification
  - Analysis and display of static short axis myocardial perfusion SPECT



#### **Cedars Sinai Blood Pool Gated SPECT**

Standalone interactive application for :

- Automatic segmentation
- Quantification of gated static short axis blood pool SPECT



#### Documentation

Automated bi-level macro-controlled printing and reporting. High quality Inkjet colour and b/w hardcopy

- On normal paper
- On premium photo paper
- 2400 dpi print quality
- Special printing software for faithful printing

## **CT Software**

#### *InterView* ™CT Pro

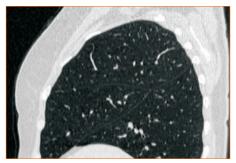
All purpose image viewer

- Optimised patient CD management
- Standard and cine mod display
- Key images selection
- DICOM and Windows printing
- MPR
- Axial / Coronal / Sagittal reconstructions
- Thick Slab creation (average)
- Wide range of toolboxes
- Exam comparison\*
- Multimedia report creation\*

## *InterView* ™CT Expert

3D solution for processing and analysis of medical images

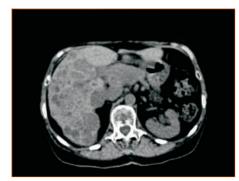
- Optimised patient CD management
- Standard and cine mod display
- Key images selection
- DICOM and Windows printing
- MPR
- Axial / Coronal / Sagittal reconstructions
- Oblique
- Thick Slab creation (average)
- Thick Slice (MIP/MinIP)
- New MPR series creation
- Parallel, curved or radial\*
- Wide range of toolboxes
- Dynamic color palette
- Region of interest 2D editing tool
- Whole volume 3D
- MIP
- Volume rendering
- Surface rendering
- Conversion of digital images into DICOM format\*
- Exam comparison\*
- Multimedia report creation\*
- Visual selections and automated bone masking\*
- \* Option



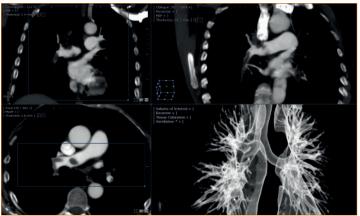
Pulmonary MPR section



Bronchial tree Volume rendering



Abdominal low-dose CT



Pulmonary Angiography MIP views and Bronchial tree VRT view

## **Dedicated CT Software**

#### *InterView*™CT Dedicated Analysis Suite

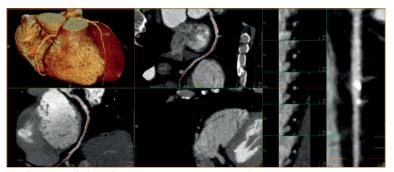
Includes the following modules:

- *InterView*<sup>™</sup> CT Cardiac CT Analysis *InterView*<sup>™</sup> CT Calcium Score Analysis
- *InterView*™ CT Cardiac Cath Analysis
- InterView<sup>™</sup> CT 3D Viewer includes cardiovascular analysis capabilities InterView<sup>™</sup> CT CT Colonoscopy Analysis

#### *InterView* <sup>™</sup>CT Cardiac CT Analysis

Comprehensive Cardiac CT analysis system:

- Automatic segmentation of the heart into its comprising parts
- Complete coronary and functional assessment of the patient's heart
- Intuitive 3D coronary artery presentation
- Virtual IVUS special view
- Easy-to-use, time saving

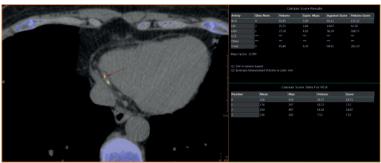


Cardiac CT analysis and 3D coronary artery presentation

## *InterView* <sup>™</sup>CT Calcium Score Analysis

Highly automated Calcium Scoring analysis module:

- Automatic segmentation
- Calcium Score calculations
- Identifies the different arteries
- Scores the calcified plaque areas
- Agaston score and plaque volume indication
- Total plaque burden calculation
- Workflow to Approve findings



Auto Calcium Scoring

## **Dedicated CT Software**

#### *InterView* ™CT Cardiac Cath Analysis

Cardiac CT integrated with Coronary Angiography in the cathlab

- Helps to understand the 3D nature of vessel and the stenosis
- Real-time visualization capabilities
- Correlates CT tissue data (e.g. plaque, wall) on the angiogram image
- Recommends optimal C-arm orientation for best demonstration of the stenosis area
- Suggests stent size and positioning
- Shows the vessel's pathway and stenosis composition in CTO cases

### *InterView* ™CT 3D Viewer with Cardiovascular Analysis

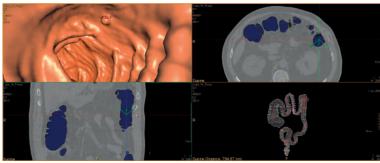
High level, simple-to-use 3D viewer and vascular imaging and analysis tool

- Comprehensive general purpose 3D medical image viewer
- CT vascular analysis tools
- Assessment of carotids, renal arteries and other peripherals
- Views and classifies plaque areas along the vessels
- Automatically identifies suspicious plaque and stenosis sites
- Supports CT, MR, PET, and XA data
- 2D viewing mode
- Slab viewing mode
- 3D viewing mode
- Endovascular viewing

#### *InterView* <sup>™</sup>CT Virtual Colonoscopy Analysis

Specialized CT virtual colonoscopy application

- Automatic and interactive navigation through the colon
- Volume Rendering of the colon
- Includes automated and fast processing tools such as:
  - Colon segmentation
  - Centerline extraction
  - Bowel cleansing
- Pre-processing of study
- Synchronized 2D and 3D views
- Clinician analysis tools:
  - 3D measurements
  - Automated fly-through
- Polyp manual marking and measurement
- Supports flexible pricing models (pay-per-use, concurrent licenses, etc)
- Intuitive user interface (minimal training required)



Automatic Colon Segmentation and Endoscopy view

# System Components and Physical Parameters

## System Components

- SPECT Gantry
- CT Gantry
- PET Gantry
- SPECT/CT/PET Imaging Table
- Multimodality acquisition console
- Power Distribution Unit

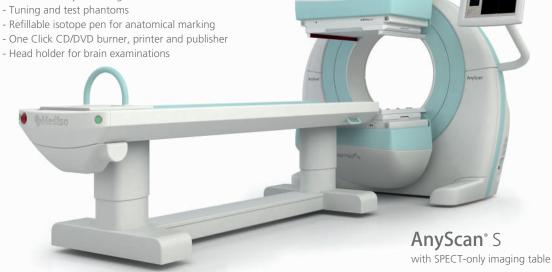
#### Dimensions, weights

Components	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
SPECT Gantry	1139	1714	1632	2100
CT Gantry	778	2116	1916	1350
PET Gantry	400	2116	1948	400
Imaging Table	2580	670	850	330
Collimators	685	562	46-68	70-125
Collimator Carts	750	560	1250	70
Power Distribution Unit	1000	600	1490	450

### **Optional Accessories**



- PET Pre-upgrade Kit for AnyScan SC
- Processing workstation
- Collimators and carts
- ECG triggering device for cardiac gated studies
- Colour laser printer
- CODONICS dry film imager



# **Special Options**

## **AnyScan**® S SINGLE single head SPECT camera

- Designed for AnyScan® Evolving Concept
- Cost effective system for starting laboratories
- Backup imaging solution for sophisticated SPECT/CT
- Matching your growing imaging needs through add on upgrade to:
  - Dual head SPECT
  - SPECT/CT
  - SPECT/CT/PET
- Entry level investment for high end imaging solutions

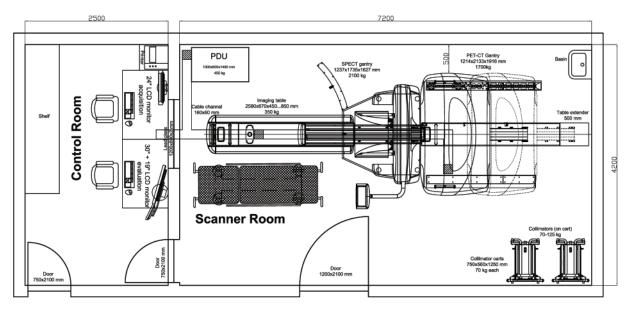


### **AnyScan**® SC CT FIRST special SPECT/CT option, available only from Mediso

- It is an indispensable solution when:
  - SPECT, SPECT/CT and diagnostic CT are used alternatively
  - Frequent use of diagnostic CT is required
- Superior imaging quality both for SPECT/CT and diagnostic CT
- Patient and user friendly solution for contrast CT scans
- Recommended for Nuclear Medicine and Radiology combined department



## Room Layout



Minimal room layout for the AnyScan® system

#### Power Supply Requirements

#### SPECT- component

Mains Voltage: 115/230 V (1 phase)Mains frequency: 45-63 Hz

- Max. power: 2.4 kVA

#### CT- component

- Mains Voltage : 400/480 V (3 phase)

- Mains frequency: 45-63 Hz

- Max. power: 65 kVA

#### PET- component

- Mains Voltage: 115/230 V (1 phase)

- Mains frequency: 45-63 Hz

- Max. power: 2.2 kVA

### **Environmental Requirements**

Constant room temperature and humidity rate required for 7 days/ 24 hours

- Room temperature:  $20 \pm 2$ °C (68°F  $\pm 3.5$ °F)
- Max temperature change rate: 5 °C/hour (7° F/hour)
- Relative humidity: 35 70% non condensing
- Atmospheric pressure: 70 106 kPa
- Dew point < 17  $^{\circ}$ C (63 $^{\circ}$ F)

#### Conformance Statement

Product design, development, production and services comply with ISO 9001:2001 and with ISO 13485:2004.

The **AnyScan**® multimodality molecular imaging system conforms to EC Directive 93/42/EEC; Annex II, Article 3 Full Quality Assurance System Medical Devices Design and safety testing has been performed in accordance with IEC 60601-1 and IEC 60601-1-2 EMC standards.

Safety labels are attached to appropriate places on equipment and appear in all operation manuals.

The supplied software conforms to DICOM standard.

The technical information provided here is not a detailed specification.

For exact details and up to date information please contact your local distributor or Mediso Medical Imaging Systems.

#### Trademarks:

Emory Cardiac Toolbox is the trademark of Emory University, Atlanta, GA. Cedars Quantitative Gated SPECT, Cedars Perfusion SPECT, Cedars Quantitative Bloodpool SPECT are trademarks of Cedars Sinai University Medical Center, Los Angeles, California.

*InterView* ™FUSION, *InterView* ™XP, *InterView* ™CLEAR, *InterView*™CT are trademarks of MEDISO Medical Imaging Systems.

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\*Work in progress

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