

SIEMENS

MEDLIGA
медицинское оборудование



SOMATOM Scope

Power configuration
Datasheet for syngo CT VC28

“Focus on the essence” VS. “Compromise on what matters”

Second best is not an option.

Healthcare facilities around the globe are under major pressure to change. They face the challenge of extending high-quality, affordable care to as many people as possible – in the age of shrinking budgets. To succeed, they must become more efficient. By doing more with less.

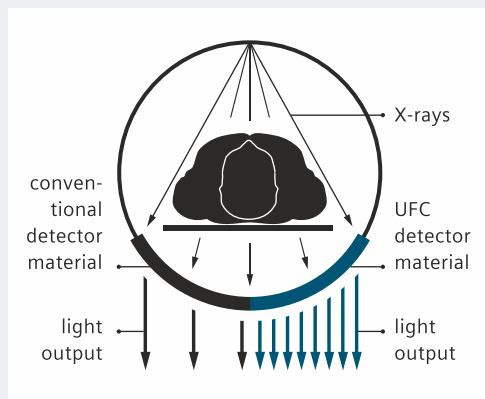
The key to mastering this new environment is knowing what really matters: the patients you see every day. To effectively meet their requirements, you need to ensure your scanning hardware cuts no corners when it comes to performance. But how can you achieve this while keeping costs in check?

SOMATOM Scope provides an answer – by focusing on the essence of CT. This cost-efficient scanner delivers outstanding image quality, at the right dose. Highly reliable and easy to use, it saves you time and effort throughout your daily routine. Moreover, a flexible service model helps keep overheads under control, safeguarding your facility's long-term competitiveness.



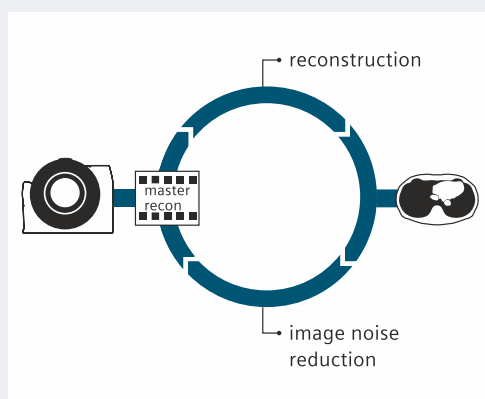
Highlights

UFC: Leading Edge Detector Material



Using Siemens' proprietary Ultra Fast Ceramics (UFC), SOMATOM Scope provides excellent image detail even at low radiation doses. This industry-leading material* – which is also used in our top-of-the-line scanners – achieves exceptional overall efficiency thanks to high X-ray absorption combined with extremely effective conversion of X-ray energy into visible light reducing noise in the images. In addition to absorption, the decay constant and the afterglow of the detector material are crucial in CT. With Siemens' UFC, providing extremely fast decay and afterglow times, the signal can be processed very fast. In only one millisecond – the typical duration of a CT projection – 99.99% of the signal is already processed. This prevents blurring, delivering crystal-clear images even for the most dose-sensitive patient groups. SOMATOM Scope features the latest version of UFC, which has been continuously improved over the last years.

IRIS: Efficient Iterative Reconstruction Technology



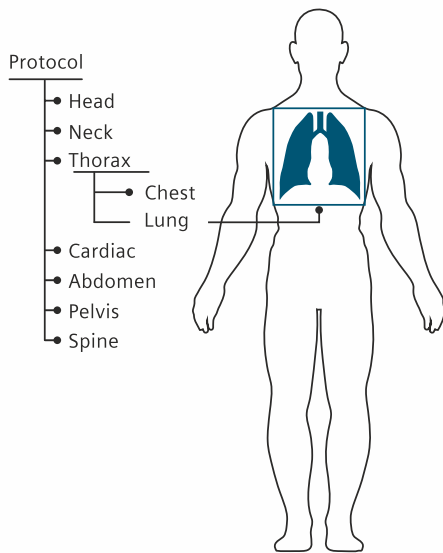
Siemens' proprietary Iterative Reconstruction in Image Space (IRIS) delivers the same image noise reduction as raw-data model based iterative reconstruction, but in a fraction of the time – as raw data is reconstructed only once. The innovative technology is ideal for cost-effective scanners: it significantly enhances spatial resolution while lowering image noise by up to 25%, enabling further dose reductions across a wide range of clinical applications. This is of particular benefit to children and patients requiring multiple scans. In addition, IRIS can improve image quality for obese patients, as it reduces image noise caused by attenuation – boosting diagnostic confidence and efficiency. IRIS uses raw data to generate a high-resolution master image, which includes all information contained in the original, but at the cost of significant noise. A series of iterative corrections is then applied to "clean up" the image, identifying and efficiently reducing image noise by comparing it to the master image without compromising sharpness – eliminating the need for time-consuming repeated forward and back projections, and expediting the scanning process. IRIS also helps maximize patient throughput without sacrificing dose reduction and image quality. The tube's heat storage capacity is utilized at a slower pace, reducing cooling times and allowing more patients to be scanned within the same time window.

Based on the number of installed systems using UFC.

*

Highlights

FAST: Efficient Workflows



Efficient workflows are key in today's medical facilities. This is why SOMATOM Scope is equipped with Fully Assisting Scanner Technologies (FAST) that optimize the entire imaging process – from planning to reading. These leading-edge technologies make complex processes faster and more intuitive, increasing productivity and freeing medical professionals to spend more time with their patients. In addition, FAST's automatic settings boost reliability and reproducibility, reducing the risk of rescanning due to user error. This translates to improved workflows and optimized resource utilization – and greater profitability. What's more, it decreases wait times for appointments, making for more satisfied patients.

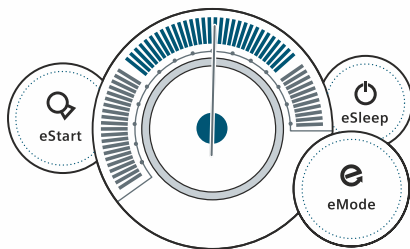
FAST Planning

Streamlining scan preparation is a vital factor for reducing examination time. FAST Planning automatically detects and rapidly applies desired ranges, eliminating the need for complex manual adjustments. This makes CT scan set-up simple and intuitive, even for less experienced technicians. Moreover, the high degree of standardization increases reproducibility and reliability, boosting diagnostic confidence.

FAST Spine

FAST Spine helps streamline another highly time-intensive task: the preparation of anatomically aligned spine reconstructions. The software detects and labels vertebrae within a predetermined scan area, and calculates their position for anatomically correct image reconstruction. This delivers up to 30 minutes' time savings for a complete spine reconstruction, while reducing the risk of mislabeling associated with manual preparation.

eCockpit: Economic CT Scanner Usage



The unique eCockpit suite enables more cost-efficient operation, reducing overhead costs. The entire working day of a CT system was taken into consideration from start-up to scanning to scan breaks to facilitate the most economic scanner usage.

eStart: extends the tube lifetime by pre-warming the tube before a scan. The tube is the most delicate hardware in a CT scanner.

eMode: reduces wear and tear on the scanner by instantly optimizing scan parameters.




eSleep: saves energy by stopping gantry rotation during scan breaks.

System Configuration

Standard system hardware	0.6, 1.0, 1.5 s rotation time Multislice UFC (Ultra Fast Ceramic) detector 70 cm gantry with $\pm 30^\circ$ tilt 82 KW max. equivalent generator power (with IRIS) DURA 422 MV High performance liquid bearing X-ray tube CT patient table (200 kg / 440 lbs table load)	Standard system software	syngo Examination syngo Viewing syngo Filming syngo Archiving & Network syngo Service Solution Image Filter SureView™ Video Capture and Editing Tool Scan Protocol Assistant syngo 3D Real Time MPR syngo 3D SSD (Surface Shaded Display) syngo Volume Calculation syngo VRT (Volume Rendering Technique) CT-Angiography Vessel analysis with Automated Bone Removal WorkStream4D™ (direct 3D-recon) syngo Dynamic Evaluation Adaptive Signal Boost
Optional system hardware	0.5 s rotation time* Recon Plus Patient table foot switch Patient table extension Additional 19" (48 cm) flat screen monitor Dual 19" (48 cm) flat screen monitor with dual display functionality Table cover paper dispenser	Standard FAST applications	FAST Planning FAST Contact
Standard workplace	syngo® Scope one console 19" (48 cm) flat screen monitor CD/DVD storage	Optional FAST applications	FAST Spine
		Standard CARE applications	IRIS (Iterative Reconstruction in Image Space) CARE Filter CARE Bolus CT CARE Topo CARE Dose4D CARE Dose Configurator
		Optional CARE applications	CARE Contrast CT ECG-pulsing CARE Vision CT with HandCARE™


* Included in syngo HeartView CT

System Configuration

eCockpit	
<p>The unique eCockpit suite enables more cost-efficient operation, reducing overhead costs. The entire working day of a CT system was taken into consideration from start-up to scanning to scan breaks to facilitate the most economic scanner usage.</p>	
<p>eStart</p> 	<p>Extends the tube lifetime by pre-warming the tube before a scan. The tube is the most delicate hardware in a CT scanner. For urgent cases, for example in traumatology, it is possible to start the scan without eStart – saving time where every second counts</p>
<p>eMode</p> 	<p>Once the user has prepared a scan protocol and entered all required information, eMode analyzes the parameters in real time and instantly fine-tunes the scan. Therefore the system is operated in the most economical way, reducing wear and tear of all moveable parts while maximizing image quality.</p>
<p>eSleep</p> 	<p>Saves energy by stopping gantry rotation during scan breaks. The system rapidly returns to scan ready mode when needed, allowing user to resume their normal routines in no time.</p>

<p>Optional system applications</p>	Extended FoV (Field of View)
	<i>syngo</i> Expert-i
	<i>syngo</i> Dental CT
	<i>syngo</i> Osteo CT
	<i>syngo</i> Pulmo CT
	<i>syngo</i> Fly Through
	<i>syngo</i> Body Perfusion CT
	<i>syngo</i> Volume Perfusion Neuro CT
	<i>syngo</i> Neuro DSA CT (Digital Subtraction Angiography)
	<i>syngo</i> CT Oncology
	<i>syngo</i> Image Fusion CT
<i>syngo</i> CT Colonography CT	
<i>syngo</i> CT Colonography CT PEV	
<i>syngo</i> HeartView CT (including ECG-pulsing)	
<i>syngo</i> Calcium Scoring CT	
<p>Optional applications for CT-guided intervention</p>	<p>Advanced Intervention</p> <p>CARE Vision CT with HandCARE™</p>

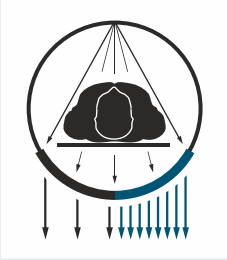
System Hardware

Gantry	
	
Aperture	70 cm / 27.6"
Depth	69.2 cm / 27.2"
Distance scan plane to gantry cover	26.7 cm / 10.5" The short distance from the gantry front to the scan plane allows for easy operator access during interventional procedures
Distance focal spot to isocenter	53.5 cm (21.1")
Distance focal spot to detector	94.0 cm (37.0")
Scan field	50 cm / 19.7" 70 cm / 27.6" with extended FoV*
Tilt	± 30°
Rotation time	0.5*, 0.6, 1.0, 1.5 s
Temporal resolution	Down to 125 ms* Continuously rotating tube-detector unit with optimized geometry for high-resolution data acquisition across the entire scan field
Patient breath-hold time indicator	Patient-friendly display at the back of the gantry for indication of the remaining breath-hold time
Three laser light markers	Coronal, sagittal, transversal laser light showing the isocenter position of the scan plane

Integrated display panel	Gantry front display showing current scan parameters such as kV, mA, scan time, table position, gantry tilt, patient name, patient ID and ECG trace*
Gantry front control panels	For convenient and fast patient positioning (e.g. in case of trauma or interventional exams) Gantry tilt control from the operator's console
Automatic patient positioning	Two user-configurable buttons on the gantry panel One touch, quick patient positioning for pre-selected clinical protocols – e.g. head, thorax
Tube Assembly	
Tube	DURA 422 MV High performance liquid bearing X-ray tube
Tube current range	25–345 mA Max. tube current equivalent to 627 mA utilizing IRIS
Tube voltage	80, 110 and 130 kV
Tube anode heat storage capacity	5 MHU; equivalent to 9 MHU with IRIS With iterative reconstruction technology at maintained image quality the same clinical results can be achieved with less dose, filling up the heat storage of the system more slowly, therefore increasing the heat storage capacity
Focal spot size according to IEC 60336	0.8 x 0.5 mm / 7° 0.8 x 0.7 mm / 7°
Multifan principle with Flying Focal Spot	
Computer-controlled monitoring of anode temperature	

* Optional

System Hardware

Generator	
Max. power	50 kW; equivalent to 82 kW with IRIS
Data Acquisition System	
UFC (Ultra Fast Ceramics) detector	Speed and efficiency based on Siemens' proprietary scintillator material with ultra-short decay, extremely low afterglow and high absorption for optimized image quality and high dose efficiency
	
Max. number of slices/rotation	16
Number of detector rows	24
Number of detector elements	17,664
Number of detector channels/slice	736
Number of projections	up to 1,250 1 s/360°
Sequence acquisition modes	4 x 0.6 mm, 12 x 0.6 mm, 16 x 0.6 mm, 2 x 5 mm, 12 x 1.2 mm, 2 x 8 mm, 16 x 1.2 mm
Spiral acquisition modes	4 x 0.6 mm, 16 x 0.6 mm, 16 x 1.2 mm
Adaptive Signal Boost	The Adaptive Signal Boost amplifies low signal areas of the CT data when high attenuation is present – such as when imaging obese patients or patients with metal implants – and further reduces streaks and noise in the image

Patient Table	
Max. table load	200 kg / 441 lbs
Table feed speed	1–100 mm/s
Vertical table travel range	45–83 cm (at table top) (17.7–32.7")
Vertical travel speed	≥ 22.4 mm/s
Scannable range	153 cm (60") / 160 cm (63") with patient table extension*
Patient table foot switch*	Foot Switch located on the bottom edge of the patient table allowing table lifting and lowering. Speeds up patient preparation and keeps the operator hands sterilized.

* Optional

Workplace Overview: syngo Scope one console



syngo Scope one console: a workplace solution combining powerful hardware with a complete clinical application suite. The intuitive, easy-to-use software

provides radiology staff with all the tools they need to support their daily routine. For data acquisition, image reconstruction and post-processing at the CT scanner.

Image Reconstruction	
Real-time display	Real-time image display (512 x 512) during spiral acquisition
Slice thickness	0.6–19.2 mm
Recon field	5–50 cm / 1.9"–19.69" 5–70 cm with Extended FoV* / 1.9"–27.6"
Recon time	up to 16* images/s
Recon matrix	512 x 512
HU scale	–1,024 to +3,071
Extended HU scale	–10,240 to +30,710
Wide range of freely selectable slice thickness for prospective and/or retrospective reconstruction	
High-performance computer	XEON Quad Core high performance CPU
Graphics accelerator	NVIDIA Quadro K600** for fast 3D post processing

Standard monitor	19" (48 cm) flat screen 1,280 x 1,024 resolution 1,024 x 1,024 image display matrix 0,29 mm pixel size
Additional monitor***	Yes
Dual monitor****	Yes
RAM storage	8 GB
Image storage	683 GB, up to 1,000,000 images
Additional storage	DVD DICOM drive: 4.7 GB DVD media, 7,300 images Write-RW/+RW/-DL/Read CD-R: 700 MB 1,200 images DICOM viewer: Included on each CD; automatically started on the viewer's PC

* Optional

** Or equivalent

*** Optional. Additional monitor for replication of primary monitor at remote location. Distance from host up to 30 m.

**** Optional. Dual monitor enables the simultaneous display of two scans on two monitors within the 3D task card, ideally used for comparison of follow-up studies or native and contrast-enhanced scans.

Standard System Software: syngo Examinations

Scan Protocol Assistant	
Up to 10,000 protocols can be edited, modified, and stored	
Easy and intuitive way to change and manage scan protocols	
Automatic Patient Positioning	
Two user-configurable buttons on the gantry panel	
One touch, quick patient positioning for preselected clinical protocols – e.g. head, thorax	
Topogram	
Length	128–1,500 mm (5–59")
Scan times	2.08–15.8 s
Views	a.p., p.a., lateral
Real-time topogram	
Manual interruption possible once desired anatomy has been imaged	
Patient Communication	
Integrated patient intercom	
Automatic Patient Instruction (API)	Freely recordable 30 API text pairs Presets in nine languages available

Sequence Acquisition	
Reconstructed slice widths	0.6, 1.2, 2.4, 3.6, 4.8, 5.0, 8.0, 9.6, 10.0, 16.0, 19.2 mm
Partial scan times (240°)	0.33*, 0.4 s
No. of uninterrupted scans per range	99
No. of ranges in autorange	8
Scan times (full scan)	0.5*, 0.6, 1.0, 1.5 s
Scan range	max. 160 cm (63")
Acquisition with or without table feed	
Automatic clustering of scans	
Dynamic Multiscan	Multiple (continuous) sequence scanning without table movement for fast dynamic contrast studies with maximum slice thickness of 19.2 (16 x 1.2) mm
Multislice Spiral Acquisition	
Reconstructed slice widths	0.6, 1.2, 2.4, 3.6, 4.8, 5.0, 8.0, 9.6, 10.0, 16.0, 19.2 mm
Temporal resolution	down to 125 ms*
Scan times full scan (360°)	0.5*, 0.6, 1.0, 1.5 s
Slice increment	0.1–10 mm
Pitch factor	0.4–2.0
Spiral scan time	max. 100 s
Scan length	max. 160 cm (63")
No. of ranges in autorange	8
Automatic clustering of scans	

* Optional

Standard System Software: *syngo* Examinations

WorkStream4D

4D workflow with direct generation of axial, sagittal, coronal, or double-oblique images from standard scanning protocols

Elimination of manual reconstruction steps

Reduction of data volume, since virtually all diagnostic information is captured in 3D slices

Patient Registration

Direct input of patient information on the Acquisition Workplace immediately prior to scan

Pre-registration of patients at any time prior to scan

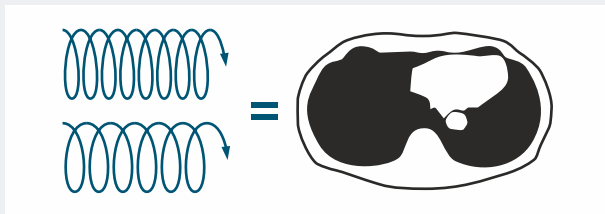
Special emergency patient registration (allows examination without entering patient data before scanning)

Transfer of patient information from HIS/RIS via DICOM Get Worklist

Transfer of examination information from scanner into HIS/RIS via MPPS (Modality Performed Procedure Step)

SureView: Siemens' Patented Solution for Multislice CT Reconstruction

Pitch independent image quality



Excellent for clinical workflow: Forget about compromises in your clinical workflow. Just specify the slice thickness in your protocols according to your clinical needs. SureView automatically takes care of providing excellent volume image quality – with exceptional performance.

Multiply your clinical performance with SureView: High-quality imaging at any scanning speed. SureView allows the CT scanner to automatically select the necessary pitch value to achieve the coverage and scan time defined by you, while keeping selected slice thickness and image quality.

Auto Field of View Adaption

When positioning the scan range, the width of the range is automatically adapted to cover the whole body of the patient

CINE Display

Display of image sequences

Automatic or interactive with mouse control

Max. image rate: 30 frames/s

syngo Dynamic Evaluation

Evaluation of contrast enhancement in organs and tissues

Calculation of

time-density curves
(up to 5 ROIs)

peak-enhancement images

time-to-peak images

Standard System Software: syngo Viewing, syngo Filming and syngo Archiving & Networking

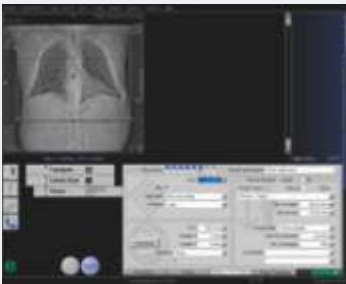
Windowing		Filming	Digital film documentation, connection to a suitable digital camera
Window width and center freely selectable			Connection via DICOM Basic print
Single window			Automatic filming
Double window (e.g. bone/soft tissue)			Interactive virtual film sheet
Multiple window settings for multi-image display			Customizable film formats with up to 64 images
Organ-specific window settings, e.g. for soft tissue and bones			Filming parallel to other activities
2D Postprocessing			Independent scanning and documentation
Image zoom and pan			Freely selectable positioning of images onto film sheet
Image manipulations	Averaging, subtraction Reversal of gray-scale values Mirroring		Configurable image text
Advanced image algorithms	Posterior Fossa Optimization for reduction of beam hardening artifacts in head images Low Contrast Enhancement for improving low contrast detectability High Contrast Enhancement for increased sharpness of high contrast structures		
Printing		Documentation on postscript printer supported	
Evaluation Tools		Video Capture and Editing Tool	Integrated solution for imaging and visualization of 4D information, allowing the generation and editing of video files for improved diagnoses, recording, and teaching. A wide range of multimedia formats are supported, e.g. AVI, Flash (SWF), GIF, QuickTime (MOV), streaming video.
Parallel evaluation of more than 10 Regions of Interest	Circle Irregular Polygonal	Image Transfer/Networking	Interface for transfer of medical images and information using the DICOM standard. Facilitates communication with devices from different manufacturers. DICOM Storage (Send/Receive) DICOM Query/Retrieve DICOM Basic print DICOM Get Worklist (HIS/RIS) DICOM MPPS (Modality Performed Procedure Step) DICOM SR viewer DICOM Storage Commitment DICOM Viewer on CD/DVD
Statistical evaluation	Area/volume Standard deviation Mean value Min./max. values Histogram		
Profile cuts	Horizontal Vertical Oblique		
Distance measurement			
Angle measurement			
Online measurement of a 5 x 5 pixel size ROI			
Freely selectable positioning of coordinate system			
Crosshair			
Image annotation and labeling			

Standard System Software: Applications

Real-time MPR	<p>Real-time multiplanar reformatting of secondary views</p> <p>Variable slice thickness (MPR thick, MPR thin) and distance with configurable default values</p> <p>Viewing perspectives</p> <ul style="list-style-type: none"> ▪ Sagittal ▪ Coronal ▪ Oblique ▪ Double oblique ▪ Freehand (curvilinear) 	syngo VRT (Volume Rendering Technique)	Advanced 3D application package for the optimal display and differentiation of different organs through independent control of color, opacity, and shading in up to 4 tissue classes
syngo 3D SSD (Surface Shaded Display)	<p>Three-dimensional display of surfaces with different density values</p> <ul style="list-style-type: none"> ▪ Soft tissue ▪ Bone ▪ Contrast-enhanced vessels 	CT-Angiography	<p>MIP: Maximum Intensity Projection</p> <p>MinIP: Minimum Intensity Projection</p> <p>Thin MIP function for projection within a small slab to focus on particular vascular structure</p> <p>Evaluation of spiral images and display of vessels, vascular anomalies, aneurysms, plaques, and stenoses</p>
syngo Volume Calculation	<p>Measurements of various tissues and organs with HU-based region growth algorithms and interactive ROI definition</p>	Vessel View with automated bone removal	<p>Simplified workflow</p> <p>Fast accurate presentation of subtracted CTA data sets</p>
syngo Dynamic Evaluation	<p>Evaluation of contrast enhancement in organs and tissues</p> <p>Calculation of</p> <ul style="list-style-type: none"> ▪ Time-density curves (up to 5 ROIs) ▪ Peak-enhancement images ▪ Time-to-peak images 		

FAST Applications

FAST Planning



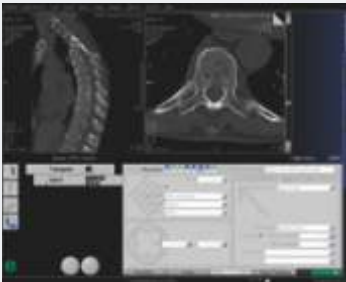
It detects the ROI based on organ characteristics, and sets the scan parameters accordingly. The automatic parameter settings provide precise organ coverage without over scanning, and limit the need for rescans due to incorrect positioning. In addition, this function can be used in critical clinical situations where there is no time for extensive manual preparation

FAST Contact



The FAST Contact tool is the easiest way to contact our Customer Care Centers* for technical and clinical applications support. It also tracks and archives issues reported to Siemens using this feature – directly from the scanner console

FAST Spine**



The FAST Spine software detects and labels vertebrae within a predetermined Scan area, and calculates their position for anatomically correct image reconstruction

* May not be available in all countries

** Optional

CARE Applications

CARE Filter

Specially designed X-ray exposure filters installed at the tube and the collimator for protocol individual optimization of patient dose and image quality

CARE Bolus CT

Scan mode for contrast bolus triggered data acquisition

Significant improvement of the planning procedure by enabling an optimum spiral scan start after contrast injection

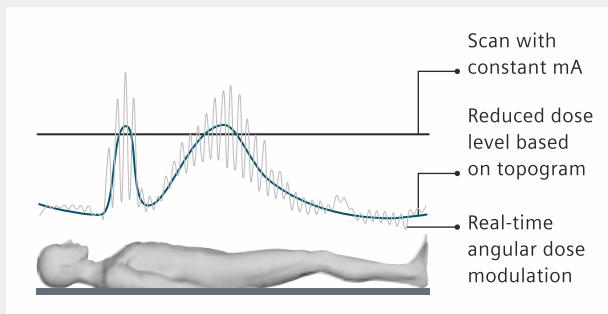
The procedure is based on repetitive low dose monitoring scans at one slice level and analysis of the time density curve in an ROI (Region of Interest)

CARE Topo

Real-time topogram

Manual interruption possible once desired anatomy has been imaged

CARE Dose4D



Automated real-time tube current adjustment for optimum diagnostic image quality at lowest possible dose, depending on patient size and anatomy

Fully automated dose management for adults and children

CARE Dose Configurator

Delivers organ and habitus-sensitive dose modulation, to better manage dosage with respect to the patient's anatomy. It offers predefined settings for children, adults of normal build or bariatric patients

CARE Contrast CT*

CARE Contrast facilitates enhanced CT examinations through the hardware and software integration of CT scanner and injector

ECG-pulsing*

Dose modulated cardiac spiral for dose reduction during the systolic heart phase (part of the *syngo* HeartView CT* package with retrospective ECG-gating). Up to 50% dose savings for the patient

Pediatric Protocols

Special clinical protocols with 80 or 110 kV selection and a wide range of mAs settings. The X-ray exposure is adapted to the child's (and small adult's) weight and age, substantially reducing the effective patient dose

Protocol Password Protection

Prevent unauthorized access to scan protocols and avoid unauthorized modifications

Iterative Reconstruction in Image Space (IRIS)

Iterative Reconstruction in Image Space (IRIS) delivers the same image noise reduction as raw-data model based iterative reconstruction, but in a fraction of the time – as raw data is reconstructed only once. The innovative technology is ideal for cost-effective scanners: it significantly enhances spatial resolution while lowering image noise by up to 25%, enabling further dose reductions across a wide range of clinical applications. This is of particular benefit to children and patients requiring multiple scans. In addition, IRIS can improve image quality for obese patients, as it reduces image noise caused by attenuation – boosting diagnostic confidence and efficiency. IRIS uses raw data to generate a high-resolution master image, which includes all information contained in the original, but at the cost of significant noise. A series of iterative corrections is then applied to “clean up” the image, identifying and efficiently reducing image noise by comparing it to the master image without compromising sharpness – eliminating the need for time-consuming repeated forward and back projections, and expediting the scanning process.

* Optional

Optional System Software

Extended FoV (Field of View)

Special image reconstruction algorithms that provide visualization of objects using an FoV up to 70 cm (27.6")*

syngo Expert-i

Enables the physician to interact with the *syngo* Workplace from virtually anywhere in your hospital

syngo Dental CT

Allows reformatting panoramic views and paraxial slices through the upper and lower jaw, and enables the display and measurement of mandibular bone structures (even on a 1:1 scale) as the basis for OR planning and oral surgery

syngo Osteo CT

Non-invasive measurement of the bone mineral density of the lumbar spine to help early diagnosis of osteopenia and osteoporosis, and to assess the effectiveness of treatment. Osteo CT measurements are standardized to the ESP Phantom (ESP: European Spine Phantom). Includes table mat and reference Phantom for Osteo CT studies.

syngo Pulmo CT

Allows the quantitative determination of CT values in the lung for diagnoses and follow-up examinations

syngo Fly Through

Virtual Endoscopy software enabling visualization of vessels, airways, and the intestines

syngo Body Perfusion

Allows the quantitative evaluation of dynamic CT data of organs and tumors: blood flow, blood volume and permeability enabling the assessment of perfusion disturbances and of perfusion changes during therapy

syngo Volume Perfusion Neuro CT

Auto-Stroke functionality for automated display of all perfusion parameters, including MTT, TTP, CBF, CBV, and permeability, automated motion correction, automated 3D assessments of infarcted tissue and tissue at risk, and perfusion plus tumor evaluation model included

syngo Neuro DSA

Direct Image Transfer, Automated Table Removal, Automated Bone Removal, preferred layout automatically applied, Neuro Best Plane, Fast Toggling, One-Click Aneurysm Evaluation, Recalculation Mode, Follow-up Workflow, and Reporting

syngo CT Oncology

Fast-track routine diagnostic oncology, staging, and follow-up. It provides a range of fully automated tools specifically designed to support physicians in the detection, segmentation, and evaluation of suspicious lesions including dedicated tools for lung, liver, and lymph node assessment. It also offers a fully automated follow-up protocol.

syngo Image Fusion CT

Facilitates functional imaging offering fusion of PET with CT data

syngo CT Colonography

Features multimonitor layouts, 2D reading, 3D reading (fly through), global view (solid/semitransparent), registered navigation (prone/supine), hide small intestine, distance to rectum, panoramic view and perpendicular flight

syngo CT Colonography PEV

Autoprocessing, Polyp Enhanced Viewing (PEV)

syngo HeartView CT

ECG-synchronized volume acquisition using prospective ECG triggered or retrospective ECG-gating mode

Basis for 3D cardiac reconstructions, e.g. CT-Angiography of the coronary vessels and Calcium Scoring

Quality control tools enable retrospective ECG viewing and interactions as well as computer-assisted heart phase definition

The ECG signal used for scanning and image reconstruction is acquired by an integrated ECG device. The ECG signal is displayed on the gantry front cover

ECG-gated, multi-phase 4D reconstruction in up to 24 phases enabling dynamic evaluation of the heart and thoracic anatomy

syngo Calcium Scoring CT

This application provides total and relative Calcium Scoring with Coronary Age calculation based on trial data (requires optional *syngo* HeartView CT)

Optional Applications for CT Intervention

Advanced Intervention

For non-fluoroscopic CT intervention

Biopsy mode with user configurable dose and windowing display

Switch between continuous and incremental table movement with user configurable increment

Automatic table positioning via buttons or joystick with auto-stop function

3 image display

Zoom and pan functionality

Head and feet label for easy orientation adaptable to physician's position

Auto-move table to displayed image position

CARE Vision CT with HandCARE

Perform interventions with real-time image guidance, including CT fluoroscopic mode. Single slice or simultaneous display of 3 slices for optimal navigation with two alternate display methods:

A) 256 x 256, 512 x 512, 256 x 256

B) 512 x 512, 512 x 512, 512 x 512

In-room joystick allows the user to control the CT system directly from the examination room

Head and feet label for easy orientation adaptable to physician's position

Auto-move table to displayed image position

User configurable dose and windowing display

Switch between continuous and incremental table movement with user configurable increment

Automatic table positioning via buttons or joystick with auto-stop function

Includes real-time image guidance

- Image rate up to 10 frames per second
- Image matrix 512 x 512
- Configurable saving of images

Foot switch: Radiation release directly at the gantry

HandCARE: Real-time dose modulation during the CT-guided intervention avoids direct X-ray irradiation of the radiologist's hand

Additional flat screen monitor: for parallel image display in the examination room

Distance from host max. 30 m

Image Quality

Low-contrast Resolution	
Low-contrast resolution is the ability to see ...	a small object (mm) with a certain contrast difference (HU) on a particular phantom (Ø) at a certain mAs value (mAs) with a particular patient dose (mGy)
Phantom	CATPHAN (16 cm)
Object size	3 mm
Contrast difference	3 HU
CTDIvol (32 cm)	13.82 mGy
Technique	0.6 s, 10 mm, 130 kV
Phantom CATPHAN (20 cm)	
Object size	5 mm
Contrast difference	3 HU
CTDIvol (32 cm)	12.88 mGy
Technique	0.6 s, 10 mm, 130 kV
Isotropic Resolution	
Isotropic voxels with voxel sizes of e.g. 0.3 mm using Siemens' proprietary SureView technology	
High-contrast Resolution	
2% MTF (± 10%)	15.6 lp/cm
0% MTF (± 10%)	17.5 lp/cm
Technique	Tungsten wire in air 160 mAs, 130 kV, 1 s, 2.4 mm

Homogeneity			
Cross-field uniformity in a 20 cm water phantom		max. ± 4 HU typ. ± 2 HU	
Phantom positioned near center of rotation			
Dose, CTDI ₁₀₀ Values mGy/100 mAs			
Phantom Ø		kV 110	kV 130
16 cm	A	12.7	18.7
	B	13.5	19.6
32 cm	A	3.7	5.8
	B	7.7	10.9
A: at center	B: 1 cm below surface		
Technique	PMMA-Phantom Absorbed dose for reference material air Max. deviation ± 30% Expected deviation ± 20% 2 x 5 mm		

Installation

Dimensions	Height (mm / inch)	Width (mm / inch)	Length (mm / inch)	Weight (kg / lbs)
Components				
Gantry	≤ 1,807 / 71.4	≤ 692 / 27.2	≤ 2,308 / 90.9	≤ 1,300 / 2,860
Patient table	≤ 836 / 32.9	≤ 700 / 27.6	≤ 2,500 / 98.4	≤ 500 / 1,100
Operator's console desk*	≤ 730 / 28.7	≤ 800 / 31.5	≤ 1,200 / 47.2	≤ 60 / 132
UPS	≤ 435 / 17.1	≤ 90 / 3.5	≤ 530 / 20.9	≤ 30 / 66
Image reconstruction system	≤ 430 / 16.9	≤ 490 / 19.3	≤ 490 / 19.3	≤ 20 / 44
syngo Acquisition Workplace				
syngo Acquisition Workplace	≤ 430 / 16.9	≤ 490 / 19.3	≤ 490 / 19.3	≤ 20 / 44

Power Supply	
Nominal voltage ± 10%	380–480 V
Nominal line frequency ± 10%	50; 60 Hz
Power Consumption	
Max. power consumption	≤ 68 kVA
Power consumption	≤ 3.7 kVA standby
Protection Against Input Power Instability	
Controllers	300 ms
syngo Acquisition Workplace	3 min, with UPS*
Frequency stability	± 5% 50; 60 Hz
Electromagnetic Compatibility	

This product is in compliance with IEC 60601-1-2 and fulfills CISPR 11 Class A

Room Environment	
Temperature range	18–30 °C (64.4–86°F)
Max. temperature gradient	6 k/h
Relative air humidity without condensation	20–80%
Heat dissipation (gantry and table)	≤ 5.3 kW scanning
Heat dissipation (computer)	≤ 1.1 kW
Surface Area for Installation	
System footprint	8 m ² / 86.1 ft ²
Minimum installation space for system**	12.1 m ² / 130.2 ft ²

* Optional

** Minimum space requirements for gantry, table and service area System configuration and options to be checked according the available area. Safety distances must be checked according to country specific requirements.



Работайте с лучшими,
всё остальное компромисс!

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