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Qty	Item Description
1	SOMATOM Confidence (64-slice) Whether you strive for advanced treatment techniques or for patient care that is both standardized and personalized - there are significant developments in Radiation Therapy that call for utmost precision. This is why we designed our new dedicated CT scanner for RT: the SOMATOM Confidence(r) RT Pro. Thanks to images that are optimized for both contouring and dose calculation and a workflow that helps reduce sources of error, it brings together standardization and personalization. There is no more compromise between efficiency, patient satisfaction, and clinical outcomes. Face present and future RT challenges with confidence. Blaze a new trail in RT.
1	RT Pro Item includes - Extended Field of View #AWP - HD FoV Pro #AWP - SAFIRE
1	RT Identifier
1	Standard rear cover Sleek touch-control screen on the front side of the gantry only.
1	Standard IRS Reconstruction computer for the preprocessing and reconstruction of the CT raw data. The reconstruction computer contains a cluster of 1 high-performance GPU boards performing the preprocessing and reconstruction of the CT data. The raw data memory is 900 GByte. The peak recon performance is 40 frames/sec.
1	Cooling System Air Air cooling for the dissipation of heat generated in the gantry.
1	iMAR #AWP The iMAR metal artifact reduction algorithm combines three successful approaches (beam hardening correction, normalized sinogram inpainting and frequency split). This allows to reduce metal artifacts caused by metal implants such as coils, metal screws and plates, dental fillings or implants. iMAR is compatible with extended FoV, the extended CT scale as well as the newest dose

Qty	Item Description
	reduction feature. Along with the new algorithm comes the simple user interface of iMAR enabling easy reconstruction of clinical images with reduced metal artifacts.
1	<p>DirectDensity</p> <p>Software feature that enables user to obtain relative electron densities directly from the CT images, allowing patients to be scanned at any kV setting**, and simplifying physics work for treatment planning.</p> <p>It includes</p> <ul style="list-style-type: none"> - CARE kV, first automated, organ-sensitive voltage setting to improve image quality and contrast-to-noise-ratio - CARE Child, dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols <p>*DirectDensity(tm) reconstruction is designed for use in Radiation Therapy Planning (RTP) only. DirectDensity(tm) reconstruction is not intended to be used for diagnostic imaging.</p> <p>**As shown by measurements with a Gammex 467 Tissue Characterization Phantom comparing standard reconstruction (kernel D30) and DirectDensity(tm) reconstruction (kernel E30). HU value to relative electron density conversion for the standard reconstruction was based on a two-linear-equations approach with individual calibration for each tube voltage. For DirectDensity(tm) images, a single tube-voltage-independent linear conversion was used.</p>
1	<p>syngo DE Scan for Single Source#AWP</p> <p>The syngo Dual Energy Scan for Single Source option offers the possibility to acquire two spiral data sets in sequence at different energies. The results are two data sets with diverse information. All features to reduce patient radiation like dose modulation or iterative reconstruction can be applied.</p>
1	<p>FAST DE Results #AWP</p> <p>With FAST DE Results you can select Dual Energy applications at the AWP and the results will be sent directly to the PACS for a straight forward Dual Energy workflow.</p>
1	<p>Respiratory Motion Management</p> <ul style="list-style-type: none"> - Advanced 4DCT/respiratory gating package that allows for prospective or retrospective acquisitions - Acquire, review/edit wave form, reconstruct, generate MIP, minIP, and AverageCT, and view 4D movie loop (optional) all on the console - Compatible with multiple hardware devices including the Anzai Belt and the Varian RGSC, both of which offer complete integration with control console
1	<p>FAST 4D</p> <p>Enables guided 4D workflows and auto adjustment of scan parameters depending on breathing rate. The new algorithm analyses the breathing curve and selects automatically one out of 3 respiratory protocols. A pre-selection of the breathing rate is no longer required. FAST 4D also provides user feedback if patient's breathing is in range or if re-teaching is recommended.</p>
1	<p>Varian RGSC online interface</p> <p>Cable to connect to Varian RGSC device.</p>
1	<p>Multi-purpose table & RTP Table Top</p> <p>Includes as standard:</p> <ul style="list-style-type: none"> - 227 kg/500 lb. capacity table - Siemens RTP flat table top, with standard 14 cm indexing

Qty	Item Description
	<p>- 165 cm scan range for RT scans</p> <p>Offers as optional:</p> <p>- Concave table top for backup diagnostic scanning</p>
1	<p>FAST CARE Package</p> <p>Suite of automation and dose-saving tools to streamline workflow and simplify dose management.</p> <p>Includes:</p> <ul style="list-style-type: none"> - FAST Adjust - CARE Profile - CARE Dashboard - FAST Planning - DoseMAP
1	<p>Computer Cabinet #AWP</p> <p>New cabinet to accommodate the computer system and UPS. Matched to the design of the control console table.</p> <p>Width: 800 mm, Depth: 800 mm, Height: 720 mm</p>
1	<p>Additional User Manual</p> <p>Additional user manual for the above selected CT system.</p>
1	<p>syngo.via RT Bundle (Identifier)</p> <p>RT system bundled with syngo.via</p>
1	<p>syngo.via Workstation Software</p> <p>The syngo.via Workstation offers 2D, 3D, 4D multi-modality routine reading capabilities and a variety of advanced applications tailored to the Workstation. The combination of syngo.via Software and Workstation Hardware is ideal for 1 - 2 users. The availability of all applications and workflows included in syngo.via Workstation is virtually unlimited, i.e. the number of opened cases is only constrained by server HW resources.</p> <p>The syngo.via client runs on standard Windows computers in the network and integrates into radiologist's reading workplace (RIS; PACS) for efficient image reading based on a wide range of clinical applications (advanced visualization applications) for different clinical cases. Those applications are available as additional options for syngo.via.</p> <p>The optional advanced visualization applications/Engines follow the flexible concurrent user model (users working at the same time).The service support for syngo.via requires the provision of an administrator with dedicated tasks and a minimum broadband Internet connection bandwidth.</p>
1	<p>syngo.via RTiS Sim&Contour #2</p> <p>The package contains 2 users.(1 Advanced Sim + 1 MM Contouring user).</p> <p>syngo.via RT Image Suite is a dedicated RT software that is designed to make multimodality simulation, image assessment, and contouring easier and better integrated - while also offering capabilities that go beyond the current standard.</p> <p>This configuration supports two users - one for simulation and basic contouring tasks and one for advanced contouring and image assessment. For concurrent use, one user can access the application via the workstation while the other has access via a client installed on another computer, e.g. the scanner console.</p> <p>Functionality for all users:</p>

Qty**Item Description**

- Image review and contouring on CT, MR, PET, PET-CT, CBCT, 4D CT, time-resolved CT / MR images (e.g. perfusion).
- Direct4D for creation of tMIP, tminIP, AverageCT, phase splitting, 4D contouring, tumor motion analysis, semi-automatic generation of ITV / Mid Ventilation phase.
- Automatic rigid image registration with automatic alignment when datasets are loaded.
- Multiple contouring tools, incl. auto contouring for organs-at-risk (brain, heart, lungs, liver, kidneys, femoral heads) and parallel contouring on multiple images.
- Collaboration tools
- Advanced Simulation user (additional functionality):
- Patient marking with reference point & isocenter management and laser steering.
- Client based access to syngo.via RT Image Suite from the scanner console.
- Simultaneous display of up to 4 images series over two panels (2 series + 2 fused series).
- Advanced Contouring user (additional functionality)
- Simultaneously display of up to 8 image series (4 series + 4 fused series).
- Deformable Image Registration including contour warping and advanced evaluation of registration (spyglass, deformation vector map, colorwash).
- Treatment dose display, warp and accumulation with RT Dose Display.

1

syngo.via Project Identifier

System identifier for syngo.via project

1

Workplace HW Extended

syngo.via Server-based Workstation HW Extended, tower floorstand configuration.

1

Prime HW Support WS Ext 5y

Prime HW Support (Workstation HW Extended ? ML110 Gen9) for 5 years

1

Monitor EIZO MX232W col. 2.1MP

The EIZO MX 232W is a color widescreen LCD monitor for diagnostic use and clinical review with a resolution of 1920 x 1080 pixels.

1

Basic Implementation Package

This Basic Implementation Package includes installation and integration services for syngo.via dedicated to one modality.

This package includes professional services, such as:

- Installation of the syngo.via server software
- Installation of the syngo.via client software on one clinical user's computer for one user
- Connection to up to 5 DICOM nodes
- Configuration of basic syngo.via workflows and rules
- Installation and integration of one syngo.via client workplace on one syngo MultiModality Workplace.
- Installation of WebViewer integrated license (syngo.via SW version VA30 or higher, country restrictions might apply).
- Installation of the syngo.via WebViewer client application on one Mobile Device or Web Client system if requested by the customer. Ensure that the customer's Web Clients / Mobile Devices fulfill the minimum requirements according to the syngo.via WebViewer Data Sheet. Verification of the syngo.via WebViewer basic functionality
- If applicable: Integration into the Local Area Network of the customer and to Siemens Remote Service over the internet connection plus basic installation service for the syngo.via hardware system at the customer's site.

The Active Directory (AD) of the customer is configured in syngo.via. The AD for integrated

Qty**Item Description**

user administration already exists at the site.

This option includes professional services, such as:

- Integration of syngo.via into the IT infrastructure using an existing Active Directory, configuration of the AD in syngo.via
- Consultation of the customer's IT administrator for routing/ports and integration of syngo.via in the customer's AD

1

syngo.via local Impl. (Identifier)

Identifier for professional services completely provided by locally organized resources.

1

Via Workstation Server HW Installation

Basic installation of the syngo.via Workstation hardware with the operating system at the customer's site by the hardware supplier. Integration into the Local Area Network of the customer and to Siemens Remote Service over internet connection.

Please check that the following information is included in the customer quote: correct and complete delivery location, customer's contact person for implementation planning. See also the questions in the Sales Checklist, which supports you in evaluation of the customer's requirements.

1

Initial onsite training 16 hrs syngo.via

Up to (16) hours of on-site clinical applications training on syngo.via basic navigation and modality specific clinical workflows, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4)users. Training will focus on the use of syngo.via in clinical routine and customization of systems based on workflow needs. This educational offering must be completed (12) months from turnover date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

1

CT Project Management

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.

1

CT Standard Rigging and Installation

This quotation includes standard rigging and installation of your CT new system.

Standard rigging into a room with reasonable access, as determined by Siemens Project Management, during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.)

It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents.

Any special rigging requirements (Crane, stairs, etc.) and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer.

All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.

1

Initial onsite training 32 hrs

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.

1

Initial onsite training 32 hrs GovOffset

Qty	Item Description
1	<p>Additional onsite training 32 hours</p> <p>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 if applicable. 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>Additional onsite training 16 hours</p> <p>Up to (16) 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 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>teamplay Welcome & Registration Package</p> <p>teamplay is a cloud-based network that brings together your imaging modality users, the systems' dose and utilization data, and the users' expertise to help you improve the delivery of care to your patients. Basic features are provided free of charge. Premium features (benchmarking, non-Siemens devices) are provided on a trial basis for three months at no charge, and may be used thereafter on a subscription fee basis.</p> <p>To register: http://teamplay.siemens.com/#/institutionRegistration/1</p>
1	<p>Surge Protective Device (SPD)</p>
1	<p>Stellant D Dual Pedestal w/Certegra WS</p> <p>Stellant D Dual Pedestal with Certegra Workstation NO Informatics, but is Informatics ready. Includes Dual Flow as standard.</p> <p>Includes Stellant D, Dual Head, pedestal mounted injector; Certegra workstation; installation and warranty through Medrad.</p>
1	<p>Low Contrast CT Phantom & Holder</p>
1	<p>AS-64 slice configuration z-Sharp Tech.</p> <p>The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 64-slice detector electronics enable a virtually simultaneous readout of two projections for each detector element - resulting in a full 64-slice acquisition. This sampling scheme is identical to that of a 64 x 0.3 mm allowing for reconstruction of 192 slices using 0.1 mm reconstruction interval increment. z-Sharp Technology, utilizing the STRATON X-ray sources and the UFC detectors, provides scan speed independent visualization of 0.33 mm isotropic voxels and a corresponding elimination of spiral artifacts in the daily clinical routine at any position within the scan field.</p>
1	<p>Confidence System Complimentary Biomed Training</p> <p>This educational offering includes system training tuition for 1 clinical engineering professional on the SOMATOM Confidence and the syngo multimodality workstation as applicable. The training curriculum depends on and is limited to the system purchased and may include multiple courses including classroom training in USA or an international site, and/or virtual and web-based training. Additional modality basics training may be required as a prerequisite to these courses and must be purchased separately. This system training includes a 15% discount. Travel and lodging are not included. This educational offering must be completed by the later of (12) months from purchase or install end date; if training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund. This forfeiture does not apply to Federal government agencies.</p>

Qty	Item Description
1	Offset Somatom Confidence Complimentary Biomed Training
1	Offset Part 14408165 Additional User Manual
1	Initial onsite training 16 hrs syngo.via offset (
1	VIA Govt Trng in Basic Imp Per agreement, credit for initial training in Basic Implementation 14412662
1	VIA Govt Server HW Install Per agreement, credit for syngo.via hardware installation by 3rd party integrator 14412656
1	Offset Part CT_ADD_32 One Additional Onsite Training 32 hours)

OPTIONS

Qty	Item Description
1	<p>High Speed 0.30 s Rotation</p> <p>Fast rotation time of 300 milliseconds for unprecedented image quality and highest scan speed. Fast gantry rotation times are the prerequisite for highest temporal resolution and are therefore essential for brilliant, motion free cardiovascular imaging.</p>
1	<p>Rear cover incl. Touch Panels</p> <p>Sleek touch-control screens on both the front and rear sides of the gantry.</p>
1	<p>DoradoNova/Green/CARINAnav/Wall</p> <p>Includes: Three movable solid state red crosshair lasers on a computerized rails. CARINAnav Virtual Simulation Patient Laser Marking System compatible with all DORADO laser systems.</p> <p>Each laser rail contains two Class II 532nm green diode lasers. Six axes adjustment. Final adjustment without removing the cover.</p> <p>Positioning and travel accuracy < 0.3 mm. Each rail contains a microcomputer, an absolute encoder for dual feedback position verification. Auto calibration. On-rail function processing. Variable speed laser movement. Brackets for angular installation.</p> <p>Bi-directional data communication between control software and the laser rails.</p> <p>Wilke laser alignment installation and quality assurance phantom with calibrated level and leveling plate.</p> <p>The CARINAnav system is LAP's state of the art tablet wireless access control unit with a modern graphical touchscreen user interface. The CARINAnav software intuitively displays three point isocenters, skin markers, MLC points, and reference points in an easy to read tabular format. Data is imported via the LAP proprietary file format interface.</p> <p>Key Features:</p> <ul style="list-style-type: none"> In CT Room Touchscreen Tablet PC LAP Proprietary File Format Interface Wireless BT Communication <p>Medical Grade Touchscreen Tablet Computer</p> <ul style="list-style-type: none"> 10" Touchscreen Interface Docking Charger Station w/ Wall Mount Bracket Operating System: Windows 8 <p>One year warranty through LAP</p> <p>Installation by LAP must be included and is sold as a separate line item (LAPLI3).</p>
1	<p>Installation, LAP Laser System</p>

Qty**Item Description**

1

Gammex CT Sim+ lasers - green/wall

The CT Sim+ laser system with RapidSim™ interface is used for patient marking and patient positioning in CT Radiotherapy Planning. The 3-Arm Laser System includes three red movable lasers consisting of two sidewall cross lasers with movable horizontal line and one overhead laser with movable sagittal line. A touchscreen monitor and wireless tablet are also included.

All vital functions of the CT Sim+ system can be controlled using RapidSim with a remote tablet and through a dedicated micro PC controller and touchscreen. RapidSim planning software includes complete connectivity to empower radiotherapy planning workflow using either DICOM or text-file interconnectivity is for convenient and flexible workflows. The complete system includes a micro-controller system, flat-panel touch-screen monitor, full functioning wireless tablet, alignment phantom and all cables needed to complete the setup. Gammex lasers offer sub-millimeter accuracy with no measurable drift.

Scope of delivery:

- 3 moving red laser arms consisting of 6 lasers total
- Micro controller with touch screen control monitor
- Handheld wireless tablet
- Power Supply and all install cables
- Alignment and calibration phantom
- User Guides
- First year of warranty (extended warranty available on request)
- Installation, calibration and training by Gammex technician (CT room must be prepared for laser installation prior to the laser installation to avoid extra charges due to room-prep delays)

Detailed Technical Specifications

Description

Siemens' latest wide bore 64-slices CT scanner designed specifically to meet the needs of the modern radiation therapy department. 80 cm large bore CT scanner.

Powered by:

- 80 kW generator and 50 MHU STRATON X-ray tube
- Stellar RT Detector: high-end detector equipped with Siemens' most advanced detector technology

Ready for:

- Respiratory Motion Management: provides smooth 4D workflow and complete integration at the CT console with Varian RGSC device
- DirectDensity™*: enables user to obtain electron densities directly from the CT images, allowing patients to be scanned at any kV setting**, and simplifying physics work for treatment planning
- ADMIRE: Siemens' latest generation iterative reconstruction technique. Ideal for noise reduction for 4D scans and crisper images for bariatric patients
- iMAR metal artifact reduction: the first technique which addresses metal artifacts based on the specific location of metal in the body
- Dual Energy: can potentially aid in better tissue visualization and characterization

*DirectDensity reconstruction is designed for use in Radiation Therapy Planning (RTP) only. DirectDensity reconstruction is not intended to be used for diagnostic imaging.

**As shown by measurements with a Gammex 467 Tissue Characterization Phantom comparing standard reconstruction (kernel D30) and DirectDensity™ reconstruction (kernel E30). HU value to relative electron density conversion for the standard reconstruction was based on a two-linear-equations approach with individual calibration for each tube voltage. For DirectDensity™ images, a single tube-voltage-independent linear conversion was used.

The iMAR metal artifact reduction algorithm combines three successful approaches to reduce metal artifacts: beam hardening correction (in sinogram regions of less severe metal attenuation), normalized sinogram inpainting (in sinogram regions of high metal attenuation), and frequency split (to mix back noise texture and sharp details that are potentially lost during inpainting).

The correction process is then iteratively refined by repeating the normalized sinogram inpainting and the mixing steps thanks to the Adaptive Sinogram Mixing.

Along with the new algorithm comes the simple user interface of iMAR. Besides the typical reconstruction parameters it only requires to select the desired protocol from a drop down menu which contains the following type of implants: dental fillings, neuro coil, thoracic coil, hip implants, extremity implants, pacemakers, spine implants and shoulder implants.

The X-ray tube's kilo voltage (kV) determines the average energy level of the X-ray beam. Changing the kV setting results in an alteration of photon energy and a corresponding attenuation modification of the materials scanned. In other words, X-ray absorption is energy dependent, e.g. scanning an object with 80 kV results in a different attenuation than with 140 kV. In addition, this attenuation depends also on the type of tissue scanned. Iodine, for instance, has its maximum attenuation at low energy, while its CT-value is only about half in high-energy scans.

Description

The attenuation of bones, on the other hand, changes much less when exposed to low-energy scans compared to high-energy examinations. *syngo* Dual Energy Scan for Single Source exploits this effect: Two spiral data sets acquired in sequence at different energies show different attenuation levels.

FAST DE Results enables a straight forward Dual Energy workflow. You can select dedicated Dual Energy applications at the AWP and they will be sent directly to the PACS without any interaction needed. Available applications for FAST DE Results are:

- DE Monoenergetic (40 keV, 50 keV, 70 keV, 100 keV, 120 keV, 140 keV, 190 keV)
- DE Mixed images

FAST DE Results is as easy as selecting a recon job and will enhance you daily workflow significantly.

Item includes
RTP Excellence Package
2 RTP Indexbars

Brief description

syngo.via provides one graphical user interface to prepare and read images from various modalities.

Supported images types are:

- Computed Tomography Images
- Magnetic Resonance Images
- PET Images
- Computed Radiography Images
- Digital X-Ray Images
- X-Ray Angiographic Images
- X-Ray Radio-Fluoroscopic Images
- Ultrasound 2D Images
- Secondary Capture Images
- Encapsulated PDFs

Standard reading functions, such as:

- Browser functionality for fast patient and data access
- Case navigator for easy and fast case navigation
- Automatic image Processing
- Automatic Loading and displaying of images in user-specific layouts, Multiple layouts for 2D, 3D diagnosis
- Ad Hoc workflow change for flexible Application handling
- Scrolling through images (e.g. movie mode, fast mouse scrolling, synchronized scrolling)
- Mirror, rotate, invert, windowing, pan/zoom, annotations, distance and angle measurement, pixel lens, ROI / VOI evaluation
- Findings navigator - create, collect ,navigate and present findings quickly
- Correlated cursor
- Series synchronization for pan/zoom, windowing, LUT, scrolling
- Locked navigation of different modality types (e.g. MR / CT)
- User-defined context menu
- Snapshot images as secondary capture
- Movie export

Integrated 3D tools, such as:

- All reformats immediately available: VRT, MIP, MIP thin, MinIP, MPR thin / thick, interactive slice thickness change

Description

- VRT Punch, VRT Gallery
- Clip plane and clip box
- Bone and Table removal for fast segmentation
- MPR/MPR Fusion and registration
- Parallel, curved & radial ranges
- 2D & 3D reference lines, 3D reference point
- Region growing and quantification for interactive segmentation of anatomical structures

Anatomic intelligence:

- Automatic spine labeling
- Automatic rib labeling for CT thorax scans
- Automatic landmark registration for accurate anatomical alignment of multiple timepoint cases

Applications for dedicated clinical areas

Beside standard 2D/3D capabilities, the following advanced functionalities for dedicated clinical areas are part of *syngo.via*.

These applications are medical products in their own right and necessary country-specific approvals might not yet be available (e.g. 510k, CE Mark).

syngo CT Coronary

Review Marker, Heart Isolation, Movie (Beating Heart), Plaque Visualization, Manual Coronary Tracking (> 2 click centerline), Cardiac Planes, Curved & Cross-Section MPR, Context-specific Reporting

CT Vascular

Review Marker, Manual Vessel Tracking (> 2 click centerline), Curved & Cross Sectional MPR, Integrated Reporting Plaque Visualization, Context-specific Reporting

PET&CT Oncology

- Navigation between segments, Timepoint comparison (two timepoints)
- Image fusion and Registration, RECIST/WHO measurement, PET and MR visualization, Basic PET evaluation, Image fusion, Registration, 3D overview image
- Context-specific reporting

syngo.CT Dual Energy

syngo.CT Dual Energy offers a viewer that displays a fused image for initial diagnosis. It includes Optimum Contrast to calculate automatically contrast-optimized images, the possibility to calculate monoenergetic images for a range of 40 - 190 keV as well as *syngo*.CT DE Rho/Z to display electron density and effective atomic number maps. The additional, optional Dual Energy applications utilize *syngo* Dual Energy's two data sets even further: the material-specific difference in attenuation enables an easy classification of the elementary chemical composition of the scanned tissue.

The Rapid Results Technology offers the ability to select the required Dual Energy results in the scan-protocol. After auto-transfer of the image data to the connected *syngo.via* system, all predefined results are calculated automatically. On top of that, an immediate distribution of the results to the connected reading environment can be triggered.

syngo.CT Dual Energy works with Dual Energy images from SOMATOM Definition, Definition Flash, SOMATOM Drive & SOMATOM Force and with single source Dual Energy images from SOMATOM Definition Edge, SOMATOM Definition AS family, SOMATOM Perspective and SOMATOM Scope (Power configuration). Dual Energy on the *syngo.via* Workstation supports datasets to a total of 3000 images (1500 images low kV plus 1500 high kV).

MR Reading

- MR Reading workflow
- Follow-up support: Follow-up layout for easy comparison between two timepoints.
- Rescan handling: Repeated scans are collected in one stack that provides an overview layout to select the best rescan for reading.
- Workflow customization and creation: MR Reading allows the user to generate new, customized workflows.
- Context-specific Reporting

Description

Workflow Automation

- Triggered by PACS or modality:
Disease-specific workflow mapping can also be done based on image information (modality and/or study description)
- Triggered by RIS:
syngo.via requests the DICOM Modality Worklist (DMWL) from the connected RIS to enable automatic disease-specific workflow mapping and prefetching of examinations from PACS for follow-up reading.

Context-specific reporting:

- Context-specific reports can be derived from different clinical applications (structured reporting).
- Findings collected in the Findings Navigator can be transferred to context-specific reporting application and can then be stored as DICOM Structured Reports.
- The reports created with *syngo.via* are stored as encapsulated PDF DICOM objects. Additionally the report can be saved in the file system as a PDF file. The stored PDF report can be viewed and printed by the clinical user.

Further functionality, such as:

- *syngo* Expert-i support for *syngo* MMWP integration
- *syngo.plaza* Integration
- Query/retrieve from DICOM nodes
- Export images and Movie and creating patient media
- Filming (DICOM print) or postscript printing functionality

Prerequisites for all service related issues:

- Availability of a customer administrator that performs dedicated administration and support tasks (e.g. 1st line support, data security, backup,...).
- Minimum permanent broadband internet connection bandwidth for uncompromised service support are 2000 kBit/s downstream and 512 kBit/s upstream.
Otherwise, certain support services may not be provided and the agreed remote response time cannot be guaranteed.

Specification of minimum broadband internet connection in detail:

- Downstream: 2000 kBit/s for Software update, IT- and Application support (Siemens Remote Service – SRS)
- Upstream: 512 kBit/s for Application support (SRS)
- Upstream: 256 kBit/s for Software update and IT support (SRS)

Scope of delivery:

- DVDs with *syngo.via* software – VB20
(software license for *syngo.via* Workstation Software)

Functionality for all users:

Contouring:

- The application supports image review and contouring on CT, MR, PET, PET-CT, CBCT, 4D CT, time-resolved CT / MR images (e.g. perfusion).
- Fast and efficient contouring with 3D contouring, adaptive smart brush, contour cropping, contour preview, contour re-size, organ templates.
- Organs-at-Risk auto-contouring (brain, heart, lungs, liver, kidneys, femoral heads).
- 4D contouring including semiautomatic ITV generation and calculation of the Mid Ventilation phase.

Image handling:

Description

- Rigid image registration including automatic registration of images, Region-of-Interest based registration, multiple registrations per image pair, export of registration matrix and registered image series.
- Direct4D for creation of tMIP, tminIP, AverageCT, calculation of Mid Ventilation phase, phase splitting, tumor motion analysis with visualization of 3D tumor trajectory.

Collaboration:

- Create annotations and measurements and share them using the Findings Navigator.
- Screen and mouse sharing with other *syngo.via* users.

Advanced Simulation user (additional functionality):

Image handling:

- Simple integration of multiple images into the contouring workflow with display of up to 4 images series over two panels (2 series + 2 fused series) and parallel contouring on multiple images.

Patient marking:

- Reference point & isocenter management.
- Direct Laser Steering for compatible LAP lasers. It requires CARINAnav 1.2 or greater and the CARINAnav Upgrade DLS.
- DICOM transfer of coordinates for LAP lasers.
- Text-file based transfer of coordinates for other laser manufacturers.
- Virtual Laser View: display of laser cross hairs on volume rendering of patient skin.

Client based access to *syngo.via* RT Image Suite from the scanner console.

Advanced Contouring user (additional functionality):

Image handling:

Deformable Registration capabilities:

- Full or region-of-Interest based registration
- Multiple registrations per image pair
- Save registrations and save deformed images as reformatted dataset.
- Contour warping and display of prior and new structure set.
- Contour propagation between breathing phases for fast 4D contouring.
- Complete tools for checking image alignment (spyglass, deformation vector map, deformation magnitude colormap).

RT Dose Display support:

- Enables easily importing previously treated dose from treatment planning systems or archives and overlaying a dosemap onto any image type supported by *syngo.via* RT Image Suite.
- Supports dose warping and accumulation of DICOM RT dose data and comparing dose volume histograms (DVH).

Brief description

Type: Hewlett Packard server-based workstation

Processor: 1x CPU

RAM: 64 GB or more

System Disk with Data Disk: RAID Level 5

Gross Image Storage: approximately 1300GB

Optical drive: CD/DVD-RW

Graphical Processing Unit: NVIDIA GPU

Operating System: Windows Server 2012 R2 Standard

Included accessory: USB Standard international keyboard

Description

Recommended Environment Requirements

A 100 Mbit/s (minimum) / 1 Gbit/s (recommended) network environment is needed for optimal performance.
For remote access a 6 Mbit/s (minimum) / 10 Mbit/s (recommended) broad-band connection is required.

Technical details are subject to change without notice!

Brief description

Prime HW Support with a service window depending on your IT Care Plan and on the SIEMENS Customer Care Center (CCC) office hours.

The delivery of the on-site Break&Fix support is performed by HP.

- Content of the Prime HW Support: **Remote problem diagnosis and support** – Siemens Service remotely uses HP support tools to isolate your problem and facilitate resolution in close cooperation with the next HP service hub in your area.
- **Break & fix service with on-site support.** – For issues that cannot be resolved remotely, an authorized HP Services representative will be sent on-site and returns your system to operational condition, repairing or replacing components or entire units. If required, HP services restore at the same time system and network functionality to allow Siemens Service to seamlessly continue with any further required remote service activity.
- **Defective Media Retention Service** – This option lets you protect sensitive data by keeping your defective disk, without the need to return defective media.
- **Integrated service management:** - Seamless cooperation and processes between SIEMENS and HP to ensure optimized end-to-end issue handling.
- **Enhanced HW support** – Provision of necessary BIOS-, Firmware and Driver update packages to keep the HW system up to date. Required patches and updates are provided remotely to be installed conveniently during the next application maintenance or service window by the responsible IT system administrator.

Brief description

Size: 23"

Brightness: 300 cd/m²

Contrast ratio: 1000:1

DICOM calibration: with bundled RadiCS LE quality control

After-sales service: 3 years swap service

Due to country-specific regulations, the monitor will be shipped without a power cable. The power cable will need to be sourced locally.

The Basic Implementation Package includes the following tasks:

- Import of all *syngo.via* server license files.
- Basic clinical configuration and integration of up to 5 DICOM nodes in *syngo.via* (e.g. one modality, one PACS, one *syngo* MultiModality Workplace, one printer). All nodes need to be validated for connection with *syngo.via*.
- Configuration of the DICOM access to *syngo.via* in one formerly installed *syngo* MMWP 2012A (VE50A) or higher;
- Integration of the basic *syngo* MMWP access into one *syngo.via* client workplace by installation and configuration of the software Expert-i on the *syngo.via* client.
- Configuration of basic workflow rules: autodelete, archiving, autorouting in *syngo.via*.

Description

- Installation of the WebViewer integrated license (applicable only for *syngo.via* SW version VA30 or higher and only in countries where released)
- Acceptance Test in cooperation with the customer.
- If applicable: Basic hardware installation and network integration
- Activation of Siemens Remote Services connections
- The configuration of the customer's Local Area Network, including the customer's Active Directory, is performed by the customer.

NOTE: An Active Directory (AD) must already exist on site.

Context of the implementation tasks:

- The DICOM conformance of the DICOM nodes is a prerequisite for connection to *syngo.via*.
- The DICOM nodes to be connected to *syngo.via* must be configured and tested by the customer, for e.g. configuration of the remote DICOM node *syngo.via*, routing rules, procedures. If necessary, the customer orders these services from the DICOM node's vendor.
- The configuration of the customer's Local Area Network is performed by the customer.
- Provision of a minimum broadband Internet connection bandwidth with 2000 kBit/s downstream and 256 kBit/s upstream for Siemens Remote Services (SRS) by the customer. If the customer does not provide SRS connectivity, then additional professional services for implementation without SRS support are offered. For service support after implementation the following minimum specification has to be provided: Downstream 2000 kBit/s (for Software update, IT- and Application support); Upstream 512 kBit/s (for Application support); Upstream 256 kBit/s (for Software update and IT support).
- The customer provides information, such as: IP addresses of the server for its network integration and the DICOM nodes identifiers.
- The customer provides the required power supply and the installation location for the server hardware, as well as the required LAN capacity. For the LAN capacity between *syngo.via* and the PACS/ modality systems a min. of 1 Gbit/sec is required. Between *syngo.via* workstations and server a min of 100 Mbit/ sec is required.
- Presence and support of the customer's administrators (clinical and IT administrator) is required during implementation. In preparation for implementation support the customer's administrators have completed the *syngo.via* web-based trainings, which are part of the scope of delivery.
- A list of applications and systems with validated connectivity to *syngo.via* can be requested from your Siemens Sales Representative.
- If a DICOM node or another system has not been validated yet for connection to *syngo.via* by Siemens, then the customer will give his acceptance though there could be a narrowed functionality of the connection.
- Installation of *syngo.via* client software on additional workplaces or configuration of additional DICOM nodes are performed by the customer's administrator or can be ordered from Siemens separately as an option.
- Project coordination is performed by Siemens. Please see the *syngo.via* Data Sheet for system requirements and detailed description of implementation tasks.

If applicable, the hardware installation service includes the following tasks:

- Unwrapping. Consolidation of all packaging material and notification to the customer that the materials are ready for removal.
- Mechanical and electrical connections at site of operation
- Mechanical installation in a common rack (e.g. HP, Fujitsu, IBM, Rittal) not older than three years and connection to a console.
- Connection to the power supply, to Uninterruptable Power Supply (if applicable)
- Startup of operating system; check status of patches, drivers, service packs and hot fixes, etc.
- Connection and network configuration of the server and the remote service board to the LAN
- Configuration of remote service board (network settings, users configuration) if supported by server
- Test monitor setup and Handover of the readily installed system to the customer.

For the installation the customer provides, as described in the *syngo.via* Data Sheet,:

- Access to the location and space for server operation

Description

- Electrical power
- LAN access and LAN configuration
- Configuration of the broadband internet access for Siemens Remote Services
- IT Administrator's coordination and support for the mechanical and IT installation.
- Server and monitor(s) are at the site of operation. The customer's monitors are accompanied by appropriate cables.
- The connection of one or two monitors to the Workstation HW (including the Workstation HW Extended) does not include monitor calibration.
- For the Workstation HW (including the Workstation HW Extended), depending on local legal regulations, the monitor installation described here may allow viewing only

If applicable, the import of a predefined container is to be done by the customer administrator for the setup of a virtualized system.

Note:

Some activities (e.g. hardware installation) may be subcontracted to a local partner of Siemens HQ.

Note:

Certain constraints apply regarding the supported OS versions for the syngo.via clients and the supported versions of MMWPs. For details please check the datasheet of the respective syngo.via version.

This hardware installation service includes the following tasks:

- Unwrapping of server and monitors (if applicable). Consolidation of all packaging material and notification to the Customer that the materials are ready for removal
- Mechanical and electrical connections at site of operation
- Mechanical connections to console and to diagnostic monitors (if applicable)
- Connection to the power supply, to Uninterruptable Power Supply (if applicable)
- Startup of operating system, check status of patches, drivers, service packs and hot fixes etc.
- Connection of the server and the remote service board (e.g. the HP dash board) to LAN; network configuration of the server and the remote service board
- Configuration of the operating system for two monitors (if delivered by Siemens)
- Test monitors setup (if applicable)
- Handover of the readily installed system to the customer.

Context of the implementation tasks:

The customer provides, as described in the *syngo.via* Data Sheet:

- Access to the location and space for server operation as well as for the monitors (if applicable)
- Server and monitor(s) are on-site of operation. The customer's monitors are accompanied by appropriate cables.
- Electrical power
- LAN access and LAN configuration
- Configuration of the broadband internet access for Siemens Remote Services
- IT Administrator's coordination and support for the mechanical and IT installation.
- The connection of one or two monitors to a workstation-based server does not include monitor calibration.
- Depending on local legal regulations, the monitor installation described here may allow viewing only.

Eaton Surge Protective Device (SPD) Panel, 250kA per phase rating, 277/480VAC Wye, Three Phase (4W+G), Surge Counter, Dimensions 12.05"H x 7.47"W x 6.69" D, Weight: 13.5 lbs, 10 Year Limited Warranty

The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 64-slice detector electronics

Description
enable a virtually simultaneous readout of two projections for each detector element – resulting in a full 64-slice acquisition. This sampling scheme is identical to that of a 64 x 0.3 mm allowing for reconstruction of 192 slices using 0.1 mm reconstruction interval increment. z-Sharp Technology, utilizing the STRATON X-ray sources and the UFC detectors, provides scan speed independent visualization of 0.33 mm isotropic voxels and a corresponding elimination of spiral artifacts in the daily clinical routine at any position within the scan field.
LAP two-day installation, calibration, and user training of CT-3 Laser Marking system in the Americas and Western Europe. Requires CT room to be prepared prior to on-site arrival of LAP installation team.