XR-CT, VAMC RICHMOND, VA
PO# 652-B40016

Qty	Item Description
1	**SOMATOM Force** The all new SOMATOM Force contains two new Vectron X-ray tubes with unprecedented 2 x 1.300 mA tube current at 2 x 120 kW generator power. The new Stellar Infinity detector, including TrueSignal and Edge Technology providing increased in plane resolution (1.840 channels) and ~ 50% increased z-coverage, compared to SOMATOM Definition Flash. SOMATOM Force takes CT imaging where it has never gone before by routinely generating ultra-thin 0.5 mm slices e.g. for most accurate stenosis, plaque and stent analysis and for low-kV imaging without compromises, even in adults or obese patients at scan speeds up to 737 mm/s (opt.). Additionally, the all new measurement system sets the benchmark in low contrast detectability. An object size of 2 mm, at a contrast difference of 3 HU, with a CTDIvol (Ø 32 cm) of only 12.3 mGy (with Phantom CATPHan (20 cm)) can be detected. The all new SOMATOM Force gantry, with its powerful hollow shaft motor achieves maximum rotation speeds of up to 0.25 seconds (optional) resulting in down to 66 ms, heart rate independent temporal resolution to freeze motion. It features the all new Turbo Flash mode, with a dynamic Field of View (FoV) of up to 50 cm, even in ultra-high pitch applications (737 mm/s table speeds, Opt.). Besides, it enables reduction in dose, while it improves overall image quality (both high- and low-contrast resolution) for all scans, resulting, e.g. in dose down to sub-mSv for cardiac imaging and below. In its third generation, Dual Energy with Selective Photon Shield II (~ 30% better energy separation, for more precise Dual Energy quantification), automatically provides a second contrast for the best possible diagnosis without any extra dose at a Dual Energy Field of View (FoV) of up to 35 cm at scan speeds up to 285 mm/s (opt.).
1	**SAFIRE #AWP** The Sinogram Affirmed Iterative Reconstruction (SAFIRE) enhances spatial resolution, reduces image noise and increases sharpness by introducing multiple iteration steps in the reconstruction process. The resulting image quality enables to reduce dose by up to 60%.
1	**FAST CARE Platform** Siemens' unique FAST CARE platform is set to raise the standard of patient-centric productivity. Utilizing FAST - Fully Assisting Scanner Technologies - typically time-consuming and complex procedures during the scan process are extremely simplified and automated, not only improving workflow efficiency, but optimizing the clinical outcome by creating reproducible results, making diagnosis more reliable and reducing patient burden through streamlined examinations. Siemens' desire for as little radiation exposure as possible lies at the heart of the CARE - Combined Applications to Reduce Exposure - research and development philosophy offering a unique portfolio of dose saving features, many of them being introduced as industry's first.

Item Description

FAST 3D Align

FAST 3D Align automatically corrects misalignment of anatomic structures, organs of the patient. It aligns those to fit it to the selected reconstruction plane for a highly automated reconstruction workflow. Additionally it minimizes the black area in the image through automatically adjusts recon field of view selection.

FAST Planning #AWP

Direct, organ-based setting of scan and recon ranges for a faster and more standardized workflow

DoseMAP

DoseMAP - Siemens CT Dose Management Program - creates transparency in dose values and makes it possible to assess the dose situation DoseMAP provides functionalities like CARE Analytics to report, document and analyze dose. It lets the user access dose values per case, per examination type, or per patient. DoseMAP may also help to protect our patients from over radiation - thanks to its alert function that warms the operator in case set dose thresholds are exceeded. Additionally, to protect the set dose levels, access to scan protocols can be restricted to prevent unauthorized changes to the scan parameters

FAST Spine #AWP

Accurate and anatomically aligned preparation of spine recons with just a single click.

SOMATOM Force

SOMATOM Force base configuration

syngo Dual Energy Scan with SPS II

The syngo Dual Energy Scan with SPS II (Selective Photon Shield II) option allows the use of both SOMATOM Force X-ray sources simultaneously at different energies, while the Selective Photon Shield II reduces dose and at the same time increases energy separation by blocking unnecessary parts of the energy spectrum. syngo Dual Energy offers the possibility to acquire two spiral data sets simultaneously from a single scan running the tubes at 80/140 kV, 100/140 kV and newly with 80/150 kV (for obese Dual Energy imaging). The results are two data sets with diverse information.

FAST DE (DE WorkStream 4D)

FAST Dual Energy (DE) is a 4D workflow for the Dual Energy data with direct generation of axial, sagittal, coronal, or double-oblique images from standard Dual Energy scanning protocols. The Advantage: the elimination of time consuming, error prone, manual reconstruction steps and a reduction of data volume up to a factor of 10, since virtually all diagnostic information is captured in 3D slices.

CT Cardio Vascular Engine @via #1

The CT Cardio-Vascular Engine provides advanced scanning options together with disease oriented workflows. Both together allow for speed in routine examinations while at the same time offering powerful functions and ease of use for complex cases. The Engine delivers excellent diagnostic output from risk or vascular assessment to accurate morphological and functional analysis while automatically integrating Dual Energy (DE) and multi-modality information into the workflow for differential diagnosis. Scanner features - HeartView, including - Prospectively triggered high-pitch Turbo Flash Spiral, e.g. for sub-mSv cardiac scanning - ECG-Gated Spiral for high and irregular heart rates - Cardio Sequence for moderate heart rates - 0.25 s rotation time to freeze any motion (e.g. cardiac motion) - MinDose ECG Pulsing for dose saving in cardiac function - Edge Technology for 0.30 mm spatial resolution - Cardio BestPhase Plus for optimal cardiac phase selection Software modules - syngo.CT CaScoring for quick risk assessment - syngo.CT Coronary Analysis for quantitative assessment of coronary arteries - syngo.CT Cardiac Function for left ventricular functional assessment - syngo.CT Vascular Analysis for assessment of general vascular pathologies, such as AAA Additional integrated Dual Energy (DE) functionality: (To enable the DE functionality at least 1 user license of the respective DE application has to be purchased) - syngo.CT Vascular Analysis - DE Direct Angio (with Bone Removal & Hard Plaque Removal) - DE integration of syngo.CT DE Heart PBV

Item Description

CT Cardio Vascular Engine Pro @via #1

The CT Cardio-Vascular Engine Pro extends the clinical capabilities of the functional assessment with the fully automated right ventricular assessment e.g. for cardiac impairment affecting the right ventricle. Advanced visualization tools for myocardial perfusion add an incremental value for a safer evaluation of myocardial viability after infarction, for instance. Its Autotracer function extends the automated Coronary-tree segmentation, labeling and curved planar reformation (CPR) to the major systemic blood vessels for a faster and safer vascular reading process and diagnosis. For planning of endovascular aortic repair procedures the measurements required are automatically stored in manufacturer-specific graft order forms. Additional software modules: - syngo.CT Cardiac Function - Enhancement for visualization of ischemia from early or late enhanced images - syngo.CT Cardiac Function - Right Ventricle for right ventricular functional assessment - syngo.CT Vascular Analysis - Autotracer for automatic identification and anatomical labeling of major blood vessels - syngo.CT Rapid Stent Planning for automatic completion of manufacturer-specific graft order forms

Keyboard English

Keyboard in the above-mentioned language.

Cooling System Water/Air #split

Water-to-air heat exchanger for the dissipation (to the air outside) of heat, generated in the gantry.

Trafo for cooling system water/air

For adequate power consumption the chiller system may need an additional transformer: If the electrical connection to be used can not provide either 400V at 50Hz or 460V at 60Hz this transformer is needed.

Service Switch

Service switch to shut off the outdoor cooling unit for maintenance or in case of emergency

Hose pipe 30 m insulated

Hose pipes to connect the "Cooling System" with the gantry.

Cable loom 25 m

Cable loom used to connect the power distribution system (PDS) with the gantry.

Earthquake kit prepared

The SOMATOM CT Scanner earthquake kit is already built in. It consists of a special floor mounting which is necessary in earthquake-prone countries or areas.

Tunnel Light

SOMATOM Force offers a funnel mood light (LED) in different, preset, adjustable colors that are synchronized with the gantry ring light. It makes the gantry bore appearing wider thus making it easier for patients with claustrophobia to undergo their examination.

Ring Light

SOMATOM Force offers a gantry ring mood light (LED) in different, preset, adjustable colors that are synchronized with the gantry funnel light. They help creating a relaxing atmosphere for your patients, making a SOMATOM Force examination even more exciting and memorable.

Patient Table

Patient table to support ultra-fast spiral scanning and up to 200cm scan range. Motor-driven table height adjustment from min. 49 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction. Horizontal scan range 200 cm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs, Table feed speed: 2-737 mm/s. Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), non-tiltable and tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension with positioning mattress, knee-leg support.

Item Description

Physiological Monitoring Module

The Physiological Monitoring Module allows to connect a 3 Channel ECG cable for ECG controlled cardiac acquisition.

ECG Cable IEC2 #D

ECG cable, IEC2 (AHA/US color coding).

Standard rear cover

Standard CT gantry back cover, without gantry panel control units.

CT Project Management

A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's 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.

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.

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.

Initial onsite training 32 hrs GovOffset

Additional onsite training 32 hours

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.

Education Pkg for Conversion Customers

This educational package is designed to assist customers in the transition to Siemens CT scanning systems. The package offering consists of two 4 hour customized workshop sessions at the customer's facility-both sessions must be scheduled for and subsequently completed within a 24 hour window, access for up to 20 imaging professionals to Siemens Medical Academy for 12 months and up to a total of 100 CE's and 1 online class session. 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.

Low Contrast CT Phantom & Holder

Surge Protective Device (SPD)

Item Description

CT Slicker

Thermoseal seams and flaps deflect fluids, reducing contaminant penetration into the cushion and table. Contaminants are retained on the tabletop or shunted to the floor. Cleanup is faster, more thorough, and contaminant build-up is reduced. Built using heavy, clear, micro matte vinyl, and top grade hook and loop fastening strips (Velcro) to better fit the specified table. Custom vinyl resists tears and minimizes radiologic interference. Latex free. Set includes CT Skirts.   Shipped with main cover, a catheter bag holder, and 3 restraining belts unless otherwise noted. Includes warranty from RADSCAN Medical.

Heart Perfusion Scanning

Dynamic scan mode to visualize ventricular myocardial perfusion for identification of perfusion defects. Applies sequential technique for minimum dose and 75 ms temporal resolution for scanning even at high heart rates.

syngo Volume Perfusion CT Body #MM

syngo Volume Perfusion CT - Body allows the quantitative 3D evaluation of dynamic CT data of organs and tumors. By providing images of blood flow, blood volume and permeability from one set of dynamic CT images. syngo Volume Perfusion CT Body allows the assessment of perfusion disturbances and perfusion changes during therapy. It might be particularly helpful in the differential diagnosis and monitoring of tumors.

syngo VPCT Body-Myocardium #MM

The new Myocardium application class of the syngo Volume Perfusion CT Body package allows the display and analysis of dynamic CT data of the heart, acquired after contrast injection with the heart perfusion scanning mode of the SOMATOM Definition Flash. A prerequisite is syngo VPCT Body.

Stellant D Dual Ceiling w/Certegra WS

New Stellant D Dual Ceiling mounted with Certegra Workstation NO Informatics. Short ceiling post - 580 mm. Other ceiling post lengths are available (different part numbers): 850 mm and 1000 mm. Includes Stellant D, Dual Head, ceiling mounted injector; Certegra workstation; installation and warranty through Medrad.

Additional User Manual

Additional user manual for the above selected CT system.

syngo.CT DE Advanced Package @via#1

The syngo.CT Dual Energy Advanced Package includes all Dual Energy Applications that are available for syngo.via.

CT with syngo.via (identifier)

CT with syngo.via (identifier)

CARE Child

Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols

syngo.via CT Scanner Bundle

CT system bundled with syngo.via

syngo.via Workstation

One User License of the syngo.via client server solution for multi-modality image reading. It provides 2D, 3D, 4D image reading capabilities at almost every workplace for various modalities (e.g. CT, MR, PET/CT, CR, XA image types). 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) for different clinical cases. Those applications are available as additional options for syngo.via and 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.

Item Description

WebViewer User #1 Integrated Server

syngo.via WebViewer is a web-based client server add-on to syngo.via. It provides high-speed 2D and 3D image data review and basic manipulation functionality within the healthcare institution's network and through secure VPN connection both over LAN and wireless connections. The integrated server can be used for internal image distribution only (internet access only by VPN infrastructure). The syngo.via WebViewer runs on PC, Mac and laptops equipped with appropriate browsers, on Windows Tablet PC, on Apple iPhone, iPod Touch and iPad.

syngo.via General Engine #1

The syngo.via General Engine provides functionalities for highly efficient reading and reporting of routine to advanced cases. The syngo.via General Engine comprises the following software modules: ALPHA technology speeds up the workflow by automating and standardizing reconstructions and improves consistency in image presentation. syngo.via Advanced Reporting enables efficient and structured management and communication of syngo.via results plus easy creation and administration of report templates.

PACS-Driven Implementation Pkg.

This PACS-Driven Implementation Package includes installation and integration services for syngo.via in a radiologic workflow mainly supported by the PACS functionality. This package includes professional services, such as: - Installation of the syngo.via server software on the server hardware - Installation of the syngo.via client software on one clinical workplace for one user - Connection to up to 5 DICOM nodes - Image call-up of syngo.via from the PACS' user interface - Assistance in setting up image call-up of syngo.via from the PACS' user interface. This may require the purchase of software and services from the PACS vendor. - Configuration of basic syngo.via workflows and rules - Integration of one syngo.via client workplace with one syngo MultiModality Workplace. - Basic installation service for the syngo.via at the customer's site. - Integration into the Local Area Network of the customer and to Siemens Remote Service over internet connection. - Installation of WebViewer integrated license (syngo.via SW version VA30 or higher, country restrictions might apply).

VIA Govt Trng in PACS Imp (FMV$-2,000)

Per agreement, credit for initial training in Basic Implementation 14412663

Server-based Workstation

syngo.via server tower floorstand configuration.

HP Care Pack. 5y WS HW Support

Extended Prime HW Support for 5 years

EIZO MX241W Display

The EIZO MX 241W is a color widescreen LCD monitor for diagnostic use and clinical review with a resolution of 1920 x 1200 pixels.

Server HW Installation Standard

Basic installation of the syngo.via server 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.

VIA Govt Server HW Install (FMV$-1,500)

Per agreement, credit for syngo.via hardware installation by 3rd party integrator 14412656

Syngo.via Promo SY Gen Eng (FMV-$20,000)

his promotion enables customers with purchase of syngo.via Server or Syngo Via Workstation solution, a reduction in the price of Syngo General Engine by the amount of $20,000. To qualify, Customer's binding purchase order must be received by Siemens on or before September 30, 2015 and syngo.via system delivery if not purchased with a Siemens scanner, must occur no later than December 31, 2015.

Item Description

Virt Initial Trn for GOV 4hrs, syngo.via

This virtual initial consultation session, up to 4 hrs in duration, is designed to define the clinical customization of syngo.via specific to radiology workflow for government facilities. Through direct communication with a clinical education specialist, this session will identify and configure site-specific workflow and imaging storage and retrieval parameters. This educational offering must be conducted no more than 4 weeks before the scheduled system turnover event. This consultation session will be scheduled during standard business hours, Monday through Friday. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

Initial onsite for GOVT 24hrs, syngo.via

Up to (24) 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)government 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.

WebViewer HW Installation

Basic installation of the syngo.via WebViewer 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.

NG syngo.via CT CI Engines Classroom

Tuition for (1) imaging professional to attend Siemens Classroom Course at Siemens Training Center. The objectives of this class are to review CT post-processing and advanced software options in an interactive setting with hands-on sessions using syngo.via. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. 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.

Virt'l Add'l Trng GOVT 2hrs syngo.via

This virtual training session up to (2) hrs in duration is designed to reinforce essential syngo.via clinical applications and workflow concepts through direct communication with a clinical education specialist. Government imaging professionals will have the opportunity to review, practice, and reinforce learning. This training session will be scheduled during standard business hours, Monday through Friday. The training offering must be completed (12) months from the later of turnover date or offering purchase date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

Additional GOVT trng 16hrs, syngo.via

Up to (16) hours of on-site clinical applications training on syngo.via navigation and modality specific clinical workflows, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) government users. The training offering must be completed (12) months from the later of turnover date or offering purchase date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

syngo.via for Clinical Administrators

1   SY8VIAITVC   **Virtual syngo.via IT Admin Training**

Part No. / Product	Description
	The SOMATOM Force is Siemens' state-of-the-art high-end Dual Source CT that provides the possibility to scan with Turbo Flash speed to be two steps ahead in a) Preventive Care, with kidney-friendly low-kV scanning and low dose early detection (e.g. in Lung and Colon)* b) Freezing Motion, with free-breathing CT imaging and fastest, most versatile scanning (Turbo Flash Spiral mode) c) Decision Making, with 4D imaging at up to half the dose and most precise DE quantification SOMATOM Force - the scanner that is able to scan: - adults and obese patients at very low kV settings in order to save radiation or contrast media dose (concentration)** - with comparable air-to-soft tissue contrast (e.g. lung and colon) at significantly lower dose, compared to Definition Flash) - to scan soft tissue and the brain at new and higher low-contrast resolution

Part No. / Product	Description
	- with the Turbo Flash mode up to a FoV of 50 cm, dependent on the pitch (min. FoV 35 cm), making it suitable for trauma and ED imaging, also in obese patients
	- all organs for dynamic perfusion imaging (whole organ coverage) (opt.)
	- 4D dynamic imaging at reduced doses, compared to Definition Flash (opt.)
	- 4D dynamic imaging at higher temporal resolution and longer ranges (opt.)
	- the whole heart in 4D dynamic myocardial stress perfusion (quantitative) (opt.)
	- in Dual Energy without dose penalty at a very high precision for iodine quantification (opt.)
	- in Dual Energy at a fast acquisition speed of up to 285 mm/s, at a larger FoV (35 cm) making it suitable for ED/trauma imaging. (opt.)
	- the heart in Dual Energy mode with a temporal resolution down to 66 ms (opt.)
	- the heart routinely below 1 mSv, and selected patients even at 0.1 mSv (opt.)
	- patients without the need for breath hold or holding still
	- pediatric patients without controlled breathing
	- thorax/heart/abdomen in about 0.2 s at a dose of <3 mSv
	- to scan the heart even in the systolic phase with Turbo Flash mode (opt.)
	- to scan the body and the heart at an higher high-contrast resolution (standard: 22 lp/cm @ 0% MTF in x/y plane (0.24 mm) and 16.7 lp/cm in z-direction (0.30 mm))
	- to scan the lung at a slice width of down to 0.4 mm (opt.)
	*The SOMATOM Force *may achieve the same Contrast-to-Noise level (in terms of image pixel noise) in the image at reduced dose."* ** *"With the low kV / high mA capabilities of the VECTRON tube, SOMATOM Force allows scanning with a very high tube current of up to 1300 mA at 70, 80 and 90 kV, such that a high tube output even for these low kV settings can be achieved. Along with SOMATOM Force's unique Turbo Flash Mode, this scan configuration is also available for conventional spiral or sequential scanning."*
	- at 66 ms temp. resolution for all heart rates (even atrial fibrillation) (opt.)
	- obese patients up to 307 kg (opt.) with 78 cm bore and 2 x 120kW
	- at up to 60% lower dose with iterative recon (SAFIRE)* at an unprecedented recon speed
	* In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The following test method was used to determine a 54 to 60% dose reduction when using the SAFIRE reconstruction software. Noise, CT numbers, homogeneity, low-contrast resolution and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with SAFIRE showed the same image quality compared to full dose data based on this test. Data on file. The SOMATOM Force is founded on the two fully-integrated Siemens' Stellar Infinity detector systems, with two revolutionary Vectron X-ray sources, the Turbo Flash Spiral scanning up to 737 mm/s, the diagonal z-Sharp technology, Dual Energy with Selective Photon Shield II and a range of proven CARE solutions from X-CARE to the Adaptive Dose Shield.

Part No. / Product	Description

	Using Siemens' diagonal z-Sharp technology the SOMATOM Force can provide the fastest sub-millimeter volume coverage at industry's highest spatial resolution. The high rotation time of 0.25 seconds delivers excellent temporal resolution up to 66 ms independent from the heart rate.
	
	The SOMATOM Force opens a door to new levels of patient friendliness with the speed to cover the entire thorax in less than a second - if necessary even without a breath hold. A whole-body scan requires only five seconds, while for perfusion or dynamic vascular imaging long-range scans become routine and pediatric scans become sub-second procedures. Your patients will be off the table faster than ever before - with positive feelings about their scan experience. Turbo Flash is also the solution for scanning your most difficult patients (i.e. obese and trauma patients, restless children, patients who cannot hold their breath for long), thus causing no time-consuming interruptions in your daily practice.
	
	And now Siemens is once again redefining speed: the new SOMATOM Force, with the new FAST CARE technology platform, allows you to maximize clinical outcomes - meaning you will have the best possible clinical results, but with significantly fewer resources bound to the CT system. The ultimate goal is to provide you with more time for patients and diagnosis - in effect, patient-centric productivity. The complete examination - from scan preparation, scanning, reconstruction, and data assessment - is streamlined, leading to a fast and reliable diagnosis with less patient burden. Ultimately, the combination of highest image quality and highest patient-centric productivity is the lever to maximizing your clinical outcomes.
	
	Maybe even more important - and impressive - is the significant reduction in dose which allows e.g. for sub-mSv scanning in case of cardiac imaging Furthermore, the third generation of dual source systems also enables the user to acquire Dual Energy data and benefit from Dual Energy post processing without compromising image quality or dose. Due to the introduction of the new Selective Photon Shield II, with an even further improved energy separation for more precise DE quantification, each scan on the SOMATOM Force can now become a precise Dual Energy scan. At the same time, X-CARE protects individual organs and the most radiation-sensitive body regions - for example, female breasts - by accurately and efficiently minimizing exposure while preserving image quality.
	
	With the new SOMATOM Force with FAST CARE, Siemens introduces several innovative Combined Applications to Reduce Exposure (CARE). CARE kV, for instance, is the industry's first tool that automatically solves the complex equation for optimal image quality at lowest possible dose for each individual CT exam while considering tube voltage, tube current, and contrast changes at different voltages and attenuation. This allows you to benefit from the industry's widest tube voltage range - not only 150 kV for bariatric imaging but now, if necessary, also down to 70 kV for new safety and image quality standards, not only in pediatric imaging, but thanks to Vectron tube, The SOMATOM Force may also allow obese low kV imaging. Add SAFIRE*, our raw-data-based iterative reconstruction and define low dose for all body regions to take best care of your patients' well-being.
	
	* In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical tas
	
	The SOMATOM Force
	System Overview
	
	- SOMATOM Force Gantry
	  The SOMATOM Force gantry is founded on two fully-integrated Stellar Infinity Detector systems, with two revolutionary Vectron X-ray sources, the Turbo Flash Spiral scanning up to 737 mm/s, the diagonal z-Sharp technology, Dual Energy with Selective Photon Shield II and a range of proven CARE solutions from the Adaptive Dose Shield to X-CARE.
	
	  The 78 cm large bore, the 200 cm scan range - with patient weight up to 307 kg (676 lbs) (opt.) - and the 200 kW generator power, it can scan most acute patients independent of size or condition, helping to save precious time from scan to diagnosis.
	
	  It's Ultrafast rotation time of 0.25 sec. (optional) leads to acquired (not reconstructed) 66 ms temporal resolution to freeze any cardiac motion even in high and irregular heart rates.
	
	  The optional Dual Source Turbo Flash Spiral mode acquisition of 2 x 192 x 0.6 mm allows for increased scan speed up to 737 mm/s e.g. for pediatric head or chest CT scans or routine sub-mSv heart examinations in patients with stable/low heart rate and a weight of up to 90kg.
	
	- Vectron tubes with diagonal z-Sharp Technology

Part No. / Product	Description
	The two Vectron sources provide cooling through an water-chilled e-catcher, closely mounted to the rotating anode, for direct cooling of the anode Utilizing the Turbo Flash Spiral scanning technology in combination with Siemens' own diagonal z-Sharp Technology it routinely enables the industry's highest isotropic, scan field position and pitch independent spatial resolution. This allows a highly beneficial combination of exceptional image detail and unmatched sub-millimeter volume coverage of 737 mm/sec enabling whole body examinations within sub-seconds and seconds, even without the need for breath hold - adapting to challenging patients such as poly-trauma and incautious or uncooperative patients, leading to an improvement in image quality (e.g. minimized motion artifacts) and patient comfort (e.g. no breath hold,). In addition, the Vectron Tubes are equipped with the Adaptive Dose Shields world's first dynamic tube collimation that protects the patient from clinically irrelevant radiation in every spiral scan. - Stellar Infinity detector The revolutionary Stellar detector, is designed to minimize electronic noise using Siemens' innovative TrueSignal technology. It thus significantly improves the signal-to-noise-ratio (SNR). In combination with Siemens' proprietary UFC scintillator the SOMATOM Force acquires 2 x 192 slices per rotation at outstanding dose efficiency. Herein the new Stellar Infinity detector hardware minimizes electronic noise and cross-talk, through its TrueSignal technology. By further applying Edge Technology the spatial resolution can now be increased to an unprecedented 0.30 mm (16.7 lp/cm) in daily clinical routine, which makes it finally suitable for clinical practice as the signal-to-noise ratio is adequate without an additional increase in dose. In combination with UHR (optional), it delivers a slice width of unprecedented 0.4 mm allowing visualizing extremely small anatomical structures with exceptional quality, for example the complex inner-ear bones,. - Power Generator The generator power of up to 2 x 120 kW delivers sufficient resources for every clinical challenge and thus helps to acquire exceptional image quality and save precious time from scan to diagnosis. - Patient table The patient table with a scan range of up to 200 cm and a load capacity of up to 307 kg / 676 lbs. (optional) in combination with the 78 cm gantry diameter of the SOMATOM Force virtually adapts to any patient independent of size or condition thus helping to avoid patient exclusions. - FAST CARE With Siemens' unique FAST CARE platform, the SOMATOM Force is set to raise the standard of patient-centric productivity. Utilizing FAST - Fully Assisting Scanner Technologies -, typically time-consuming and complex procedures during the scan process are extremely simplified and automated, not only improving workflow efficiency, but optimizing the overall clinical outcome by creating reproducible results, making diagnosis more reliable and reducing patient burden through streamlined examinations. For example FAST Spine automatically labels all vertebrae and discs after the data acquisition and prepares typical reconstruction ranges rapidly in spine examinations. - Low Dose with CARE Siemens has developed many significant products and protocols that follow the "As Low as Reasonably Achievable" (ALARA) principle to reduce radiation dose to the lowest possible level. This desire for as little radiation exposure as possible lies at the heart of our CARE - Combined Applications to Reduce Exposure - research and development philosophy. The SOMATOM Force consequently offers a unique portfolio of dose saving features; many of them being industry's first like the Adaptive Dose Shield, CARE kV or 70kV scan modes. Using Siemens' CARE solutions radiation dose can be significantly reduced compared to conventional CT systems. Clinical Applications The SOMATOM Force introduces the third generation of Siemens Dual Source Dual Energy imaging, proven by more than 1.500 installations worldwide and a wide range of clinical publications. With the all-new Selective Photon Shield II and a larger field of view (500 mm FoV visual, 350 mm full Dual Energy FoV), it offers up to 30%

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	increased energy separation. SOMATOM Force now allows DE scanning with 80 kV/150 kV, 90 kV/150 kV and 100/150 kV with Sn (tin) filtration. Thus is adjusted even for larger patients, all the while the additional diagnostic information of Dual Energy is available without additional dose Adaptive 4D Spiral With its unique Adaptive 4D Spiral plus scan mode (optional) the SOMATOM Force overcomes the coverage limitations in dynamic CT imaging when using a static detector and allows for up to 80 cm coverage in dynamic CT imaging. It even enables for 4D CT DSA evaluation. 3D Interventional Suite In addition the SOMATOM Force optionally offers a built in 3D minimal invasive suite, enabling 3D guided interventions with full control of the radiologist due to the all-new wireless in-room control. Neuro BestContrast Neuro head image quality is significantly improved with Neuro BestContrast, by optimizing grey/white matter differentiation without increase in radiation dose. HeartView With the HeartView CT option the SOMATOM Force achieves the industry's lowest heart rate independent temporal resolution of 66 ms. It allows to reliably scan all heart rates - even highest and irregular heart rates (atrial fibrillation), e.g. in acute chest pain evaluation, in coronary visualization, dynamic myocardial stress perfusion imaging and in functional analysis of the heart. Heart Perfusion The optional Heart Perfusion mode, for quantitative, dynamic myocardial stress perfusion imaging, is a sequence shuttle mode to dynamically cover up to approximately twice the detector width for myocardial perfusion studies of up to 105 mm, with sufficient temporal resolution of 66 ms even for high heart rates. This it provides sufficient temporal resolution even for high heart rates. **SOMATOM Force** System specification in detail **1. System Gantry and Detector:** Aperture: 78 cm; power supplied via low-voltage slip ring. Patient Table: Standard table (200 cm) or Multi-purpose table (opt.) are available. The standard table consists of: - Motor-driven table height adjustment from min. 49 cm to max. 92 cm - longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction - Horizontal scan range 200 cm - Control elements on both sides on the front and rear panel of the gantry - Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table) - Max. table load: 227 kg/500 lbs (optional 307kg/676lbs) - Table feed speed: 2-800 mm/s - Distance between gantry front and table base 40 cm, e.g. for convenient positioning of a mobile C-arm between gantry and table or for convenient access during CT-intervention. - Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), non-tiltable and tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension with positioning mattress, knee-leg support - 4 pairs of optional Foot Pedals, available for high capacity table, conveniently allow table lifting and lowering from various positions - Optional Multi-purpose table: Additional exchangeable table tops for High-capacity patient and trauma table top; RTP table top - In the case of emergency stop or power failure, the tabletop can also be

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	moved manually in horizontal direction

Scanning system: Adaptive Array Detector (AAD) systems based on UFC with 88,320 elements for measurement system A and 61,440 for system B. 2 x 192 detector electronic channels (DAS) utilized for up to 2 x 192 slices/rotation acquisition, and 1,840 for measurement system A and 1,280 for system B, measuring channels per slice (The measuring system can contain replacement components).

In cases of very low signal at the detector (e.g. when scanning bariatric patients), the Adaptive Signal Boost improves image quality by amplifying individual pixels based on an analysis of the surrounding image data. It reduces streaks and noise and maintains the correct HU values for large patients.

Spiral acquisition modes: 192 x 0.6 mm, 64 x 0.6 mm, 40 x 0.6 mm, 32 x 0.6 mm, 20 x 0.6 mm, 10 x 0.6 mm, 32 x 1.2 mm, 16 x 0.3 mm*, 8 x 0.3 mm*, 16 x 0.6 mm*, 8 x 0.6 mm*.

Sequence acquisition modes 64 x 0.6 mm, 32 x 0.6 mm, 32 x 1.2 mm, 12 x 1.2 mm, 1 x 5 mm, 1 x 10 mm, 8 x 0.3 mm*, 8 x 0.6 mm* (* optional).

The scan field diameter is 50 cm.

Three laser light markers: Horizontal, sagittal, and vertical laser light that shows the isocenter position of the scan plane.

2. Tube Assembly:
Source: The two Vectron sources provide cooling through an water-chilled e-catcher, closely mounted to the rotating anode, that significantly reduces extrafocal radiation,for reliable performance when operating two x-ray sources at an ultrafast rotation time of 0.25 sec.

- 2 x Vectron high performance X-ray source
- Tube current range: Single source 20-1.300 mA
- Dual Source 40-2600 mA
- e-Catcher, catching extra-focal electrons off the anode, thus directly cooling the anode through its internal water cooling. - Focal spot size according to IEC 60336: 0.4 x 0.5mm/8°, 0.6 x 0.7 mm/8° and 0.8 x 1.1 mm/8°.
- Computer controlled monitoring of anode temperature
- Multifan principle with new diagonal flying focal spot (diagonal z-Sharp technology)
- 2 x Adaptive Dose Shields with ultrafast blade positioning and movement enabled through SiDaNet (Siemens Data Net Bus technology)

3. Diagonal z-Sharp Technology:
The unique Vectron X-ray source with diagonal z-Sharp technology utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating multiple thousand 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' Stellar Infinity Detector hardware and the highly integrated 2 x 192- slice detector electronics enable a virtually simultaneous readout of two projections for each detector element - 2 x 2 x 96 slices for every viewing angle - resulting in a full 2 x 192-slice acquisition. Diagonal z-Sharp technology, utilizing the Vectron X-ray sources and the Stellar Infinity detector hardware, 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.

- 2 x 192-slice acquisition with diagonal z-Sharp technology
- routine 0.5 mm slice with 0.3 mm cross-plane resolution
- 0.4 mm slice with extra-large UHR comb (32 x 0.6 Collimation) (opt.) and a spatial resolution of 32 lp/cm (0.16 mm)
- Industry's highest isotropic and scan field position independent spatial resolution of 0.33 mm voxel size
- Visualization of the smallest anatomical structures with exceptional image quality in complex inner-ear bones, lungs or small sized vessels such as the intracranial, mesenterical and coronary system. Based on that accurate stenosis measurements or stent planning with outstanding precision are enabled.

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	4. High Power X-ray Generator: 2 microprocessor-controlled, low-noise high-frequency generators with integrated, automatic self-testing system for continuous monitoring of operation. Settings: High-voltage range 70, 80, 90, 100, 110, 120, 140 and 150 kV; power max. 2 x 120 kW (depends on clinic network) - for no compromises in obese imaging - adjustable in fine steps. The kV are automatically pre-selected through CARE kV in finest 10 kV steps based on patient body habitus and examination type for lowest possible dose at constant signal to noise ratio (image quality). The generator can maintain very high tube current (up to 2 x 1.300 mA) even during low-kV imaging thus allowing to benefit from radiation dose or contrast media concentration reduction - from pediatric to adult patients. ***"Early clinical experience based on imaging of the left ventricle and aortic root (TAVI studies) demonstrate that a reduction of contrast media administration may be possible using SOMATOM Force´s Turbo Flash Mode and its low kV / High mA capabilities."*** **5. Control and Evaluation Unit:** Control box: CT control with patient intercom, user-recordable patient instruction system, 30 automatic patient instruction (API) text pairs are available in nine languages. *syngo* Acquisition Workplace: The *syngo* Acquisition Workplace provides an intelligent and reliable workflow for data acquisition, image reconstruction and routine post-processing at the CT scanner. Built on the unique *syngo* platform, the *syngo* Acquisition Workplace is intuitive and user friendly. Computer system: High-performance computer with DVI graphics card for fast 3D post-processing. High resolution, flicker free, 19-inch (48 cm) color flat panel display for medical diagnostic applications combining the demanding requirements of medical imaging with the advantages of liquid crystal displays. This display provides a resolution of 1280 x 1024 and has a wide viewing angle, features high contrast even under high ambient light conditions. Display light output stability is enabled by controlled backlight throughout the whole lifetime. Keyboard and mouse, External USB 2.0 devices for data storage are supported **6. CT Image Computer System:** Reconstruction computer for the preprocessing and reconstruction of the CT raw data. The reconstruction computer contains of a cluster of high-performance processors performing the preprocessing and reconstruction of the CT data External USB 2.0 disks for quick and easy raw data storage are supported Reconstruction fields of 5 cm to 50 cm through raw data zoom with the possibility of freely selecting the image center either prospectively before each scan or retrospectively. Reconstructions of different slice thicknesses from a single raw data record, e.g. lung soft tissue and lung high-contrast with CombiScan, with simultaneous suppression of partial volume artifacts. Up to 8 reconstructions per scan range can be predefined with the examination protocol. Patient-related storage of the image and raw data. Image display: 1024 x 1024 display matrix; screen splitting configurable up to 64 image segments. CT value scale from -1024 to +3071 HU. For very dense objects, the CT value scale can be extended from -10240 to +30710 HU (extended CT scale) e.g. for suppressing metal artifacts.10,000 pre definable examination protocols **7. Cooling System:** Gantry is cooled with a water/water cooling system. An optional split cooling (water/air) is available to reduce reconstruction efforts and costs. System operating temperature: 18-28°C, 20 - 75 % rel. air humidity (not condensing). **8. *syngo* User Software:** *syngo* features an intuitive and thus easy-to-learn user interface developed from prototypes in close cooperation with users. *syngo* visualizes the examination in individual process steps on so-called task cards, such as patient registration or examination card. A large number of functions and input parameters as well as the language used can be selected according to individual requirements. Frequently repeated processes can be automated and saved. Patient registration: The system can accept patient data in different ways. These include entering the data via keyboard or transfer of a work list via network. DICOM work list: Software module for accepting lists of patient data and exam requirements from a Radiology Information Systems (RIS) via DICOM Get Work list functionality. The program enables very

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	efficient working and enables consistent patient data. In emergency cases, fast registration is possible. Here the system automatically assigns an emergency number which can later be replaced by the actual patient number. The input profile can be designed individually. Examination card: The SOMATOM Force is delivered with a large number of predefined examination protocols (e.g. for pediatric applications), making examination planning a very fast and efficient procedure. Example: A three-phase examination of the liver available as independent protocol only needs to be adapted to the patient's individual situation. Each examination is represented pictorially as a so-called "chronicle", which views the individual phases of the examination separately. This has the advantage that the individual phases of the examination can be accessed quickly and selectively and changes to the protocol can be made easily in graphical mode via drag-and-drop using the mouse. With a so-called routine window, it is possible to adapt individual examination parameters, representing a submenu of the essential parameters and giving information at a glance about the parameterization of the examination. Viewing card: On the viewing card it is possible to move interactively with the mouse through the image volume of the ongoing examination. The images of different examinations can be displayed simultaneously for comparison. A large number of functions are available for evaluation, documentation and archiving. Filming card: A virtual film sheet shows a 1:1 display of the film sheets to be printed out, thus enabling an effective preview of filming jobs and rewindowing of the images, as well as providing a large number of evaluation functions. Layout changes are possible interactively with up to 64 images. The printout parameters for the autofilming process running in parallel to acquisition or reconstruction are also defined with the filming card. Freely selectable positioning of images onto film sheet, configurable image text. 3D card: Secondary reconstruction calculation: Real-time MPR for real-time reformatting of secondary reconstructions. Slice orientation: coronary, sagittal, oblique and double-oblique. Secondary reconstructions can be determined from the topogram, other MPR views or from a 3D surface reconstruction. Reconstruction with selectable slice thickness. WorkStream4D with Asynchronous Recon (also possible with Dual Energy Data: FAST DE (opt.)): *syngo* WorkStream 4D, now also for Dual Energy Data (Called FAST DE) is the standardized workflow guide for confident patient management. Up to 8 pre definable axial, coronal, sagittal and oblique MPR and MIP up to sub mm recon jobs possible. The Asynchronous Recon allows for multiple image reconstructions and reformats, parallel to scanning. With this feature, up to eight reconstruction job requests can be loaded into a scan protocol. Immediately upon completion of the scan acquisition, these reconstruction jobs are automatically executed in the background without delaying the start of next patient examination. WorkStream4D eliminates manual reconstruction steps and reduces the data volume up to a factor of 10, since virtually all diagnostic information is captured in 3D slices. CT Angio: Software for the reconstruction of angular projections from the images of a spiral data record for the display and diagnosis e.g. of aneurysms, plaques, stenoses, vascular anomalies or vascular origins. MIP: Maximum Intensity Projection, MinIP: Minimum Intensity Projection and Thin MIP available. Interfering or irrelevant parts of the image can be eliminated with the integrated volume editor. The angular projections are reconstructed around a definable axis, whereby the maximum CT values in this direction are selected for each angular projection. The resulting images can be viewed with the CINE function as a series of images with a 3D image effect. 3D Display: Software for the three-dimensional display of surfaces of a body region from a series of continuous slices, for display and analysis of complex anatomies, e.g. the visceral cranium, pelvis, hips, for the purpose of planning surgical interventions. The 3D objects can be tilted and rotated interactively on the monitor and can also be displayed in relation to multiplanar reconstruction (MPR). Volume card: Volume scans of tissues and organs, based on a "region-growing" algorithm and interactive ROI definition. DynEva card: Software for dynamic evaluation of the contrast enhancement in organs and types of tissues, enabling the reconstruction of - Time-density curves (up to 5 ROIs) - Peak-enhancement images - Time-to-peak images. Video Capture and Editing Tool: Software contains integrated solution for imaging and visualization of 4D

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	information, allowing the generation and editing of video files for improved diagnoses, recording and teaching. A wide range of multimedia formats is supported, e.g. AVI, Flash (SWF), GIF, QuickTime (MOV), streaming video. Additional task cards available as an option. **9. Examination and Evaluation Functions:** Topogram: scanning perspectives: a.p., p.a., lat.; length of scan field: 128 - 2000 mm; width of scan field: 512 mm, 2.0 - 21 s. The topogram can be switched off manually when the desired examination length is reached. Scan field size: 50 cm. Rotation times (360°): 0.25 s (opt.), 0.285, 0.33, 0.5, 1.0 s. Slice thickness in sequence: 0.4 (UHR*), , 0.5, 0.6, 0.75, 1.0, 1.2, 1.5, 2.0, 2.4, 3.0, 4.0, 4.8, 5.0, 6.0, 7.0, 7.2, 8.0, 10.0, 14.4, 15.0, 20.0 mm (* optional). The Dynamic Multiscan allows continuous sequence scanning without table movement for fast dynamic contrast studies with maximum slice thickness of 57.6 mm. Scan times (full scan) 0.25 (opt.), 0.285, 0.33, 0.5, 1.0 s. Slice thickness in spiral: 0.4 (UHR*), 0.5, 0.6, 0.75, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 10.0 mm (* optional) real-time image display. Real-time image display for immediate image preview when every second counts. Immediate image reconstruction and display without time delay simultaneously to data acquisition in 512 x 512 matrix size. Spiral Scanning technique for continuous volume scans with continuous table feed in multirotation mode possible. Max. scan time 100 seconds with full low-contrast resolution. Volume length ~ 197 cm with full low-contrast resolution (max. 200 cm scan range possible using multiple automatic ranges). Selection of the pitch factor between 0.35 and 3.2 depending on scan mode. Selection of up to 33 free definable scan ranges per protocol and individual anatomic sections can be successively combined and then scanned automatically. In addition individual anatomic sections can be successively combined and then scanned automatically. Storage of up to 10,000 examination protocols. Rotation times/cycle (360°): 0.25 s (opt.), 0.285, 0.33, 0.5, 1.0 s. Dynamic Multiscan spiral examination without table feed: Continuous multirotational data acquisition in one slice position with up to 100 scans in uninterrupted, continuous sequence without table feed. Scan cycle time: 0.75 - 60 seconds with quantitative evaluation and graphical display of time-density curves. Adaptive 4D Spiral (optional): Continuous multirotational data acquisition with continuous smooth bi-directional table movement for quantitative evaluation and graphical display of time-density curves over entire organs. It facilitates volume perfusion studies in head (Stroke) and body applications (e.g. liver, kidneys, etc.) for a perfusion range of up to 22 cm. Moreover it allows dynamic studies up to a scan range of 80 cm, e.g. after aortic stent graft operation or for dynamic vascular (filling) studies of the peripheral vessels. The intelligent algorithm Neuro BestContrast improves native head image quality especially grey/white matter differentiation. Images are decomposed into high and medium/low spatial frequencies. While relevant tissue information is contained in medium and low frequencies noise is dominated by high frequencies. Separate processing of medium and low frequency information improves the tissue contrast without amplifying image noise resulting in a better signal to noise ratio. Image reconstruction and storage: Image reconstruction in full resolution (512 x 512 matrix) takes place during the examination, with full cone beam reconstruction, diagonal z-Sharp Technology and full image quality. Reconstruction fields of 5 cm to 50 cm through raw data zoom with the possibility of freely selecting the image center either prospectively before each scan or retrospectively. Reconstructions of different slice thicknesses from a single raw data record, e.g. lung soft tissue and lung high-contrast with CombiScan, with simultaneous suppression of partial volume artifacts. Up to 8 reconstructions per scan range can be predefined with the examination protocol. Patient-related storage of the image and raw data. Image display: 1024 x 1024 display matrix; screen splitting configurable up to 64 image segments; CT value scale from -1024 to +3071 HU. For very dense objects, the CT value scale can be extended from -10240 to +30710 HU (extended CT scale) e.g. for suppressing metal artifacts. Image evaluation: Complete software-controlled image evaluation program for all diagnostic requirements. CINE Display: Dynamic display technique for the visualization of time or volume series. A series of up to 1024 images can be displayed at a frame rate of at least 30 f/s. Automatic or interactive mouse-operated control. Multitasking functions: Simultaneous processing during operation of the scanner.

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	Real-time Display: Image reconstruction in pace with the examination in full image quality (512 x 512 matrix) (with full cone beam reconstruction and diagonal z-Sharp Technology). Metro Display: Simultaneous display, processing and evaluation of images from other patients while the current patient is being scanned. Metro Documentation: Simultaneous documentation of images from any previously examined patient while the current patient is being scanned. Metro Copy: Automatic transfer of image data to the *syngo* CT Workplace (optional) or a DICOM network node. **10. Network Module:** For the connection to a local Ethernet (10, 100 Mbit or 1-Gigabit) in order to communicate with networked printers, diagnostic and therapy workstations, RIS or HIS systems and teleradiology routers. Scope of functions: - Configurable network stations. - Unlimited selection of stations. - DICOM Standard (Digital Imaging and Communications in Medicine) for the transfer of information between DICOM-compatible units from different manufacturers. The scope of functions is described in detail in the DICOM Conformance Statement, and the standard version comprises the functions Send/Receive, Query/Retrieve and BasicPrint, Work list, Storage Commitment, MPPS (Modality Performed Procedure Step). **11. Integrated CARE Solutions:** UFC based Stellar Infinity Detector: Dose reduction compared to conventional CT detectors. High efficiency for low mAs requirements enable best possible image quality with low patient dose at increased resolution and ~50% increased z-coverage, in comparison to Definition Flash The new and ultra-fast Adaptive Dose Shield, powered by SiDaNet (Siemens Data Network Bus): world's first dynamic tube collimation that protects the patient from clinically irrelevant radiation in every spiral scan and newly also in Perfusion scans, such as the Adaptive 4D Spiral for significant additional dose reductions. Both tubes are equipped with an Adaptive Dose Shield, that is controlled and positioned through SiDaNet, and X-CARE, allow to reduce direct peripheral exposure in Spiral CT for the most dose-sensitive body regions while preserving constant high image quality e.g. the breast during a chest CT exam or the eye lenses during neuro CT exams. Adaptive Dose Shield becomes now also available for 4D dynamic imaging through ultrafast blade drives and the fast control of SiDaNet bus communication. X-CARE: Partial scanning to reduce direct X-ray exposure for the most dose-sensitive body regions, e.g. the breasts, thyroid gland or eye lens. Turbo Flash Spiral scanning: Ultra-fast spiral scanning in Dual Source mode with up to 737 mm/s, allows for additional dose saving especially in ECG-triggered scans*, e.g., cardiac or chest scanning (* optional) CARE Dose4D uses at first an automated adjustment of the dose level depending on patient size based on the attenuation values obtained from the standard (singular) topogram along the patient z axis. In addition CARE Dose4D uses a real-time adaptation of the tube current during the scan based on the actual attenuation of the X-ray beam measured around the patient. It delivers significant x-ray dose reduction for all body regions scanned compared with standard sequence or spiral scanning; The projections are evaluated per second to optimize the mA level instantaneously. In combination with the extreme adjustment speed of the tube current, CARE Dose4D enables consistent high quality images in every anatomical position. Thinner axial slices and/or longer scan ranges become possible because of reduced tube loading; It also enables ultra-low dose examinations for pediatric patients. CARE Filter: Specially designed X-ray exposure bow-tie filter installed at the tube collimator. Dose reduction with optimized image quality. Additional protocol dependent bow-tie filtration e.g. cardiac and pediatric body protocols. CARE kV Industries first automated, exam-specific voltage setting to optimize contrast-to-noise-ratio and significantly reduce dose.

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	Pediatric Protocols: Special examination protocols with 70 and 80 kV and a large range of adjustable mAs values for optimum adaptation of the radiation exposure to the age and weight of the child to be examined. CARE Topo: Real-time topogram, Manual interruption possible once desired anatomy has been imaged. CARE Bolus: Operating mode for CM-enhancement triggered data acquisition. The objective is optimum utilization of the contrast medium bolus in its "plateau" phase in the target organ. This option has been especially adapted to the increased speed and timing requirements resulting from the multirow capability and faster rotation. The CM enhancement is observed via monitoring scans in a user-defined ROI with a trigger threshold. As soon as the enhancement reaches its predefined threshold, the spiral scan is triggered as quickly as possible. License for software use on one modality. **12. Siemens Remote Service:** Siemens Remote Service (SRS) enables a wide range of medical equipment-related remote services resulting in increased system availability and efficiency. SRS employs sophisticated authentication and authorization procedures, state-of-the-art encryption technologies and logging routines together with strictly enforced organizational measures that provide optimal patient data security and access protection. The following SRS services can be ordered for all service agreement customers: Remote Diagnosis & Repair: In case of an unforeseen system malfunction, Siemens competent experts may directly connect with the CT system in order to identify the problem quickly. Moreover the remote repair function enables Siemens to often correct software errors immediately. Should an engineer on site be required, Remote Diagnosis & Repair allows Siemens to identify defective parts efficiently and accelerate their delivery, thereby keeping repair times to a minimum. Notes on software use: Use of the entire integrated software, including optional software programs, is restricted exclusively to the application with this system. Note: This product is in compliance with IEC60601-1-2 and fulfills CISPR 11 Class A. Note: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. **13. The Welcome Package** The package contains a welcome letter, three current versions of the customer magazine SOMATOM Sessions, CARE Analytics CD (dose analysis and evaluation software), three Siemens Mouse Pads, pens and an e-Learning CD
	Dose reduction with CT has been limited by the currently used filtered back projection (FBP) reconstruction algorithm. When using this conventional reconstruction of acquired raw data into image data, a trade-off between spatial resolution and image noise has to be considered. Higher spatial resolution increases the ability to see the smallest detail; however, it is directly correlated with increased image noise in standard filtered back projection reconstructions as they are used in CT scanners today. Iterative reconstruction approaches allow decoupling of spatial resolution and image noise. With the Sinogram Affirmed Iterative Reconstruction (SAFIRE), correction loops are introduced into the image generation process. These iteration loops utilize raw-data information to significantly improve image quality. Additionally, image noise is removed in the iterative corrections the without degrading image sharpness. The noise texture of the images is comparable to standard well-established convolution kernels. The technique results in a excellent image quality with reduced noise and increased image sharpness that can be translated to dose savings of up to 60 %* for a wide range of clinical applications. * In clinical practice, the use of SAFIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. The following test method was used to determine a 54 to 60% dose reduction when using the SAFIRE reconstruction software. Noise, CT numbers, homogeneity, low-contrast resolution and high contrast resolution were assessed in a Gammex 438 phantom. Low dose data reconstructed with SAFIRE showed the same image quality compared to full dose data based on this test. Data on file.

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	Siemens has always been at the forefront to deliver highest image quality and reduce radiation dose to the lowest possible level at the same time. But today, an additional barrier has to be mastered to maximize clinical outcome: overcome the growing restrictions and limitation of resources. With FAST CARE, Siemens opens a new chapter in CT, explicitly focusing on the optimization of patient-centric productivity in modern healthcare delivery. With FAST CARE, time-consuming and complex procedures such as scan or recon preparations are extremely simplified – ideally reduced to a single click. The scanning process gets more intuitive and the results become more reproducible. The FAST CARE platform consists the following features: FAST Scan Assistant: An intuitive user interface for solving conflicts by changing the scan time, resp. the pitch and/or the maximum tube current manually. CARE kV: First automated, organ-sensitive voltage setting to improve image quality and contrast-to-noise-ratio while optimizing dose and potentially reducing it by up to 60%. CARE Child: Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols CARE Profile: Visualization of the dose distribution along the topogram prior to the scan CARE Dashboard: Visualization of activated dose reduction features and technologies for each scan range of an examination to analyze and manage the dose to be applied in the scan CARE Dose Configurator: Enhancement of Siemens' renowned real-time dose modulation CARE Dose4D, introducing new reference curves for each body region and for each body habitus allowing to adjust the configuration even more precisely to the patient's anatomy. Dose Notification: As requested by the new release of the standard IEC 60601 3rd editions, the SOMATOM Definition Flash provides the ability to set dose reference values (CTDIvol, DLP) for each scan range. If these reference values are exceeded the Dose Notification window informs the user. Dose Alert: As requested by the new release of the standard IEC 60601 3rd editions, the SOMATOM Definition Flash automatically adds up CTDIvol and DLP depending on z-position (scan axis). The Dose Alert window appears, if either of these cumulative values exceeds a user-defined threshold.
	FAST Planning assists the scan and reconstruction planning, based on a topogram, to provide an easier, faster and standardized workflow in CT scanning. FAST Planning features the selection of the anatomical region of interest from a list prospectively defined scan and reconstruction ranges, automatic detection of the scan region(s) of interest and proposal of corresponding scan range(s) in the topogram (in a narrow or wide lateral FoV), optimized FoV and automatic iso-center adaptation for Head scans.
	DoseMAP is exists of the three parts. These three parts in combination with each other deliver a complete and comprehensive dose management. **Report Dose**: Create transparency and document dose values. - DICOM SR Dose Reports: DICOM structured file allows for the extraction of dose values (CDTIvol, DLP) - DoseLogs: Whenever a limit exceeds of the set up reference dose levels (Dose Notification and Dose Alert) automatically a report is created on the system. The report can for example be used for audit purposes. **Analyze Dose**: Assess the dose situation. - CARE Analytics (*): makes it possible to set a query and retrieve DICOM SR Dose Reports. With CARE Analytics it is possible assess DICOM SR Dose Reports from different DICOM nodes and document dose data to get an insight in radiation dose per case or examination type, cumulative dose per patient or to start in-house doe reporting. Exported and structured dose information makes it possible to monitoring the dose over time and gives an insight in the radiation values per examination type. Based on that outcome, measures can eventually be defined to

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	reduce dose. *)CARE Analytics is a non-medical software tool designed to query dose information from Structured Dose Report objects. - <u>CARE Dashboard</u>: Pre-examination dose check-up by showing an overview of all the used dose reduction features per scan. - <u>CARE Profile</u>: Pre-examination dose check-up by displaying the dose distribution prior to the scan at every z-position. **Protect Dose:** Manage access to protocols and potentially protect patients from over-radiation - <u>Access protection</u>: by setting a password it is only possible to change and access the scan protocols in the Scan Protocol Assistant by authorized staff members only. - <u>Dose Notification and Dose Alert</u>: Both functionalities may help to protect from over-radiation and warn the operator in case set dose thresholds are exceeded. Dose Notification checks the dose values per chronicle entry. Dose Alerts checks the accumulated dose per z-position.
	FAST Spine provides various modes that automatically create anatomically orientated spine reconstructions based on a 3D volume. It provides an easier, faster and standardized workflow in CT scanning. FAST Spine features automatic segmentation of the spinal canal, automatic labeling of the vertebrae, anatomically oriented slices – (orthogonal to the spinal canal), coronal and sagittal reconstructions which refer to the curvature of the spinal column and more. All modes offer the possibility to adapt the results manually. FAST Spine requires Workstream 4D.
	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. 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 exploits this effect: Two X-ray sources running simultaneously at different energies (80/140 kV, 100/140 kV or 80/150 kV) acquire two spiral data sets showing different attenuation levels.
	The Asynchronous Recon in FAST DE allows for multiple image reconstructions and reformats, parallel to Dual Energy scanning. With this feature reconstruction job requests can be directly loaded into a scan protocol. Immediately upon completion of the scan acquisition, these reconstruction jobs are automatically executed in the background without delaying the start of next patient examination.

	The **CT Cardio-Vascular Engine** permits access for one user for the following scan modes and software modules:
	
	Scanner features
	
	- **HeartView** for the industry's lowest heart rate independent temporal resolution.
	
	    - Fully integrated ECG device facilitates ECG gating and **Adaptive ECG pulsing** for maximized dose reduction.
	
	    - Fastest rotation speed **of 0.25 s per rotation** delivers the highest native temporal resolution and fastest volume coverage.
	
	    - Constant **highest native temporal resolution of 66 ms** to freeze any motion, which could lead to motion artifacts (e.g. cardiac motion).

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	- ECG-gated, prospectively triggered **high-pitch Turbo Flash Spiral** for scanning at highest volume coverage:
	    - For high speed whole body examinations with up to 737 mm/s scan speed
	    - For fast thorax scans visualizing the aorta and the coronaries in one scan at very low contrast dose (e.g. for TAVI/TAVR planning)
	    - Fast whole-body scanning of patients who cannot lie calm for longer time, e.g. geriatric and pediatric patients (latter even w/o the need of sedation)
	    - For coronary CTA scanning of the heart in a quarter beat with a Dual Source acquisition mode at a temporal resolution of 66 ms, acquired within a single diastolic phase (monophasic) allowing for lowest possible doses down to <1 mSv
	    - With split-second thorax imaging of heart, chest, or both, for ultra-low dose triple-rule-out examinations with a temporal resolution of 66 ms
	
	- The **Cardio Sequence** is an intelligently triggered sequence, fast enough (66 ms) to freeze the heart and robustly visualize the coronary arteries even at high and arrhythmic heart rates (Arrhythmia Compensation). It also introduces the Siemens-only, dual-step pulsing, with a low dose level during the systolic phase to calculate ejection fraction and a short peak for acquiring the data for coronary imaging.
	
	- The intuitive **ECG editing** tool allows adapting for extra beats in arrhythmic situations providing optimal retrospective image reconstruction.
	
	- **z-Sharp technology** provides the high spatial resolution required for exceptional visualization of the complex coronary and vascular anatomy.
	
	- With **Edge technology** the spatial resolution can now be increased to an unprecedented 0.30 mm in daily clinical routine, which makes it finally suitable for clinical practice as the signal-to-noise ratio is adequate without an additional increase in dose.
	
	- **Adaptive Dose Shield** for spiral acquisition to eliminate pre- and post-spiral over-radiation.
	
	- **BestPhase Plus**, software dedicated to automatically detect the optimal phase for motionless coronary visualization. The phase is defined in either end-systole, end-diastole, or both time points and automatically reconstructed
	
	- The **4% MinDose algorithm** lets the user save even more dose for coronary CT angiography. A special algorithm decreases tube current during ECG-Pulsing down to 4% of the nominal value, thus decreasing dose, compared to conventional ECG scanning. Only in combination with syngo.CT Cardiac Function these data can be additionally used for full functional assessment over all cardiac phases.
	
	- **DirectViewing** is a tool for real time navigation through full volumes of up to 24 heart phases by using an integrated, fast 3D volume viewer. DirectViewing completes the workflow of Cardio BestPhase by giving you the flexibility to individually visualize phases for all coronary arteries.
	
	- **CARE Dose4D** delivers the highest possible image quality at the lowest possible dose for patients - maximized detail, minimized dose.
	
	- **200 cm scan range** for full-body CT angiographic imaging without compromises.
	
	- Fast and accurate visualization of complex neurological disorders of head, neck, and spine using dedicated X-ray reconstruction techniques, e.g. Posterior Fossa Optimization (PFO), image reconstruction, and beam hardening correction algorithms for artifact elimination.
	
	Software modules
	
	- *syngo*.**CT CaScoring** is a workflow step that quantifies coronary calcifications (mass, volume, Agatston equivalent) and calculates the patients coronary age. During the evaluation, the patient's score is compared to the scores of a healthy reference group. Implemented large reference databases are:
	    - MESA, McClelland, Circulation, 2006 (USA, 6,110 patients); Data support for different ethnic groups: Caucasian, Asian, Hispanic, etc.
	    - Hoff, Am J Cardiol, 2001 (USA, 35,246 patients)
	    - Rumberger, Mayo Clinic, Proc, 1999 (USA, 1,898 patients)

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	- HNR, Schmermund, Atheroscl., 2006 (Germany, 4,275 patients) - Raggi, Circulation, 2000 (USA 9,730) *- syngo.*CT Coronary Analysis provides a cardiac-specific set of automatic pre-processing steps and display functions for quick and reliable evaluation and quantification of angiography images of the coronary arteries. With these features, the case is ready for review when first opened, thus saving many manual workflow steps and bringing more efficiency into daily practice. The rule-out of coronary artery disease is possible in less than a minute. - Automatic segmentation and labeling of the main coronary arteries (RCA, LAD, CX), major coronary branches and **saphenous vein grafts** (SVG) - The **Single-Click Stenosis** function provides all relevant information for stenosis quantification and coronary stent planning: Stenosis diameter and area, curved length, minimum lumen identification, effective diameter etc. - The **VesselSURF** tool guarantees ultra-fast, 3D vessel assessment in axial slices even without the existence of centerlines or in occluded vessels. As the vessel is being surfed the cross section and best longitudinal view are displayed in real time **The Image Sharpening** tool allows for a more thorough evaluation of calcified lesions or stents without the need for an additional reconstruction at the scanner thus saving up to 3 minutes **Robust segmentation** of the coronary vessels despite high-grade stenoses - Comprehensive 3D visualization of the **coronary tree**, including layered display of cardiac and coronary anatomy with individual VRT-presets - Anatomy Visualizer for 3D layered visualization of multiple anatomical structures - Multi-click centerline definition for **challenging evaluations** on long or partially occluded vessels **Straightened MPR** view for complete vessel overview, easy stenosis identification, and quick measurements *- syngo.*CT Vascular Analysis allows to automatically evaluate and quantify angiography images of the general vessels. It provides a vascular-specific set of auto-preprocessing steps and display functions. These functions make it possible that the case is immediately ready for review when opened, thus saving many manual workflow steps to bring more efficiency into daily practice. - The **VesselSURF** tool guarantees ultra-fast 3D vessel assessment in axial slices even without center lines or in totally occluded vessels, while displaying longitudinal/perpendicular cross sections of the vessel in addition to the 2D images in real time - Auto pre-processing steps, like auto bone and table removal, provide an **immediate vascular-only view** - The 2-click center line creation allows for a **quick and robust vessel segmentation** and CPR display **Vessel analysis tools** provide all relevant information, e.g. stenosis diameter and area, curved length, profile curve, minimum lumen identification, etc. - Measurement and reporting tools for therapy support, such as stent planning in case of AAA - Bone & Vessel Isolation mode for selective highlighting of high-contrast structures, for example to bring out the bone in trauma cases involving fractures of the femur or hip, or for **single-click plaster cast removal** - Anatomy Visualizer for 3D layered visualization of multiple anatomical structures - Multi-click centerline definition for **challenging evaluations** on long or partially occluded vessels **Straightened MPR** view for complete vessel overview, easy stenosis identification, and quick measurements *- syngo.*CT Cardiac Function is a workflow step that allows reading and diagnosing CT angiography images of the heart for the evaluation of left ventricular function. Automatic pre-processing of the data includes left ventricular volumetry and myocardial wall segmentation of the left ventricle in all cardiac phases without any interaction. Full Cardiac assessment is now possible in less than four minutes. - The local cardiac function is automatically displayed in AHA-conform 17 segment **2D polar maps** - The display of the **aortic valve plane** with a single click facilitates the quantitative assessment of the aortic annulus for pre-procedural TAVI planning. Automatic calculation of the C-arm angulation (LAO/RAO, CRAN/CAUD) helps to save contrast agent in the interventional procedure. - The workflow **CT TAVI Planning** allows to combine the assessment of the aortic annulus with the evaluation of the peripheral vessels (CT Vascular) providing streamlined TAVI planning. - Straightforward drawing of contours, e.g. in the case of congenital heart disease or severe cardiomyopathy - Polar map visualizations include flexible scaling - Comprehensive **movie functionality** - Quick creation of short-axis movies at multiple locations for PACS viewing **Cardiac movie playback** including adjustment of movie speed to heart rate The latter three applications now feature the new **Rapid Results Technology:** You can now automatically generate reproducible and standardized visualizations of the coronary and general vessels in various types and

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	orientations. Be creative and design your own personal Protocols that suit your daily work best. Define your workflow once and let Rapid Results Technology produce the decision basis for coronary evaluations, stent and TAVI planning, as well as examinations of unclear ischemia. *syngo*.via's client-server technology lets you share your Protocols with other colleagues. Save time for reading other cases by automatically creating just the right amount of information – standardized and reproducible.
	
	   - **Customize** your every-day procedures by defining and saving individual Protocols in the Protocol Configurator
	   - Re-use your **own configured protocols** for an automated generation of snapshots, radial and parallel ranges for MPR, MIP, and VRT images (incl. VRT presets) in every case
	   - Save time by **standardizing image creation**, including PACS series and filming
	   - Pause the Protocol execution at any time and adjust settings interactively
	   - Configure result names and properties including snapshot and range series
	   - Send your findings to report and printing
	   - Provide hints, tips, and recommendations both to bring standardization to clinical routine and in order to **educate fellow colleagues**
	   - Integration of **measurement tools** into a protocol, such as length and diameter measurements
	
	Additional integrated Dual Energy (DE) functionality:
	(To enable the DE functionality at least 1 user license of the respective DE application has to be purchased, i.e. *syngo*.CT DE Direct Angio and/or *syngo*.CT DE Heart PBV)
	
	- **syngo.CT Vascular Analysis – DE Direct Angio** allows for easy and precise bone-free, whole-body visualization while preserving critically small vessels such as an accessory right upper-pole renal artery. It also removes hard plaque from major vessels (e.g. for aorta, iliac, and femoral arteries) for true lumen assessment.
	   - The automated pre-processing allows for a fast and efficient use of Dual Energy data.
	   - Seamless integration of Dual Energy processing into *syngo*.CT Vascular Analysis
	   - The result (bone mask) can be switched on or off at any time.
	   - Furthermore, the data can also be viewed over the "Series Navigator" that allows a floating window mode for better comparison.
	
	- **DE integration of syngo.CT DE Heart Perfused Blood Volume (PBV)** automatically visualizes the contrast agent concentration or perfused blood volume of Dual Energy CT data of the myocardium for the assessment of myocardial viability or the visualization of infarct location and size within your *syngo*.via reading workflow.

	The **CT Cardio-Vascular Engine Pro** permits simultaneous access for one user for the following additional software modules: **Additional software modules** *- syngo.CT Cardiac Function - Right Ventricle* is an option for the CT Cardiac Function workflow step that allows reading and diagnosing CT angiography images of the heart for the evaluation of right ventricular function, allowing full cardiac assessment in less than one minute. - *syngo.CT Vascular Analysis - Autotracer* is an option for the CT Vascular Analysis workflow step that allows automatic vessel centerline extraction and anatomical labeling of the main vessels, even before the case is opened for review. When the case is opened, all major vessels are already segmented and anatomically labeled. The first vessel is prepared in CPR (Curved Planar Reformat) view and the cross-sectional cuts are displayed for immediate evaluation. It is prerequisite for fast and efficient rule-out of atherosclerosis or severe stenosis in less than a minute while making possible a full vascular assessment in less than four minutes. *- syngo.CT Rapid Stent Planning* introduces the automatic completion of manufacturer-specific stent order forms. As of delivery, *syngo*.CT Rapid Stent Planning provides the three order forms Gore Excluder, Zenith Flex, and Medtronic Endurant in pdf-Format. On top of that, new site-specific order form templates may be generated to match the requirements of other vendors (requires Adobe Acrobat Professional). *- syngo.CT Cardiac Function – Enhancement* is an extension of the CT Cardiac Function workflow step that allows visualizing hypodense and/or hyperdense myocardial areas within CT datasets acquired with Single or Dual Energy* CT. - Dedicated button for **First Pass Enhancement**: Single-click identification of hypodense areas within the

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	myocardium by color-coding - Dedicated button for **Late Enhancement**: Color-overlay helps to visualize hyperdense areas with a single click - Color overlay can be turned on/off at any time - Visualization of the **full spectrum of myocardial perfusion analysis**: First pass enhancement (Single and Dual Energy*), dynamic quantitative perfusion**, late enhancement (Single and Dual Energy*) - Overlay of myocardial perfusion information on MPRs - AHA-conform **17 segment polar maps** for all types of perfusion data - Straightforward localization of myocardial enhancement defects - Visualization of all types of perfusion data with the **Hybrid View** facilitating the analysis of the correlation of a defect with the coronary arteries - for a quick assessment of the hemodynamic relevance of a stenosis * Requires at least one user license of *syngo.*CT DE Heart PBV ** Requires *syngo* VPCT Body – Myocardium
	System operating temperature (outside the building): -30°C to 50 degree C, 0-100% rel. humidity (not condensing), Ideal for high distance installation (scan room). Cooling system contains two units (indoor + outdoor unit): 1. water/water exchanger close to the scan room and 2. an additional remote water/air exchanger The indoor unit of the cooling system may be up to 30m away from the gantry with a height difference of not more than +10m. Additional hoses for 10m and 20m distance are available to extend the distance between the CT gantry and the indoor unit to 50m. If the distance between the cooling-system and the gantry is longer than 50m an optional additional pump unit is needed. Standard distance between water/water unit and remote water/air exchanger is 40m with a height difference of not more than +20m. For longer distance between water/water unit and remote water/air exchanger the tube diameter must expand or an optional additional pump is needed.
	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
	While CT Angiography of the coronary arteries provides information about vessel stenosis, Heart Perfusion scanning allows to add valuable information on the hemodynamic relevance of those findings by enabling myocardial perfusion imaging for the entire ventricle.

	syngo Volume Perfusion CT Body offers:
	- Fast simultaneous 3 dimensional calculation of:
	  - Blood Flow image
	  - Blood Volume image
	  - Permeability image for organs and tumors
	  - various optional parameter images.
	- Automated motion correction for improved accurate anatomical object alignment.
	- Predefined evaluation settings for different organs.
	- Specific evaluation protocols for liver perfusion.
	- Organ specific guided workflow.
	- Optimized 3 dimensional color display of perfusion parameter images including image type dependent multislice windowing
	- Composite images allowing a merged display of an anatomical image with a color parameter display in the target ROI
	- ROI measurement with calculation tools of mean value and standard deviation for detailed analysis of perfusion changes

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	Documentation - Storage of all result images in the database - Direct copy to filming
	Coronary Artery Disease (CAD) causes inadequate blood supply to the heart by blocked or stenotic arteries. A dynamically acquired myocardial scan may help in characterizing the ensuing hemodynamic changes in the myocardium. ***syngo* Volume Perfusion CT (VPCT) Body – Application Class Myocardium** The new Myocardium class of the *syngo* Volume Perfusion CT Body package allows the display and analysis of dynamic CT data of the heart, acquired after contrast injection with the heart perfusion scanning mode of the SOMATOM Definition Flash. The application might help to evaluate ischemic myocardium and assess hemodynamic changes in ischemic cardiac segments. The application class contains a guided workflow that optimizes information extraction from the dedicated Flash scan mode. It allows a flexible display of time attenuation curves and allows analyzing the data with several mathematical models. Requires *syngo* VPCT Body.
	Based on a Dual Energy scan the *syngo*.CT Dual Energy Advanced Package offers the following applications: - *syngo*.CT DE Gout facilitates a reliable diagnosis of gout by visualizing deposited uric acid crystals in peripheral extremities and automatically color-coding these crystals. - *syngo*.CT DE Direct Angio offers a highly automated and reproducible vessel segmenation and bone removal even in complicated anatomical regions based on a single scan. - *syngo*.CT DE Virtual Unenhanced helps to characterize lesions in various organs by offering an enhanced and an virtual unenhaced image based on a single scan. - *syngo*.CT DE Calculi Characterization visualizes and characterizes kidney stones. - *syngo*.CT DE Heart PBV visualizes the iodine concentration in the mycardium to reveal perfusional defects. - *syngo*.CT DE Brain Hemorrhage allows to differentiate hemorrhages which are visible in the virtual non-contrast image from iodine uptaking lesions. - *syngo.CT* DE Lung Analysis allows for the color-coding of vessels that are affected by, e.g. pulmonary emboli and therefore show a significantly lower perfusion than non-affected vessels. It also enables a fast evaluation of perfusional defects in the lung parenchyma without an additional non-contrast scan. - *syngo*.CT DE Monoenergetic Plus allows to display monoenergetic images for a range of 40-190 keV. By displaying multiple monoenergetic ROIs and the associated absorption curves, Monoenergetic Plus lets users easily compare and quantify lesions and tissues. - *syngo*.CT DE Bone Marrow performs a segmentation and visualization (color-coding) of the bone marrow based on a material decomposition into bone marrow and calcium.
	With Siemens' unique STRATON tubes, the tube voltage can now be reduced to 70kV which helps to reduce radiation exposure to patients. With prior tube technology, the minimum tube voltage setting was 80 kV. The new tube voltage setting of 70 kV helps to further reduce the radiation dose to small pediatric or neonate patients. CARE Child consists of: - dedicated 70 kV scan modes - new CARE Dose4D curves for children - respective Children Protocol utilizing these features

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	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 - 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 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

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	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 as well as the possibility to calculate monoenergetic images for a range of 40 - 190 keV. 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. *syngo*.CT Dual Energy works with Dual Energy images from SOMATOM Definition, Definition Flash & SOMATOM Force.
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

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.
- A modified report can be saved as new report template

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 broadband internet connection bandwidth for uncompromised service support are 2000 kBit/s

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	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
	
	   - Upstream: 512 kBit/s for Application support
	   - Upstream: 256 kBit/s for Software update and IT support
	
	Scope of delivery:
	- DVDs with *syngo*.via software
	  (software license for one *syngo*.via client user)

	syngo.via WebViewer runs integrated on the *syngo*.via Workstation hardware and can be accessed on the clients through an URL over a web browser session. The integrated server can be used for internal image distribution only (no internet access possible). It provides mobile diagnostic image reading, basic patient data browsing, high speed 2D and 3D image review and basic image manipulation functionality* for the following use-cases: - Emergency cases, e.g. iPad (not meant for primary image diagnosis) - Second opinion - Demonstrations and conferences - Patient education * Because of the wide variation in devices supported by *syngo*.via WebViewer (desktop computers with large screens through to mobile devices such as the iPhone) not all features will be possible on all types of clients (e.g.: The flexibility to change viewing layouts on mobile devices is limited). **General 2D / 3D Imaging:** The following image processing and viewing functions are supported: - Color LUT display - Greyscale VOI LUT display - Zoom & Pan - Windowing - Rotating (3D mode only) - Home position - Pixel Lens - Measurement of Distance and Angles - Scroll - Image Fusion The following image types are supported: - CT (Computed Tomography) - MR (Magnetic Resonance) - SC Image - Encapsulated PDF - CR/DR - PET - PET/CT **Data Navigation:** - 2D Image Sorting and Scrolling - Series Navigation **Supported Browsers** The following browsers are supported: Internet Explorer, Safari, Firefox, Google Chrome web browsers. (Refer to the WebViewer Data Sheet for detailed information about the supported browser versions.)

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	Licensing - WebViewer software follows the floating licenses paradigm for clients. **Scope of delivery:** - DVDs with *syngo.*via WebViewer software - Licenses for *syngo.*via WebViewer 1 User - User Documentation **Regulatory information** The application *syngo.*via WebViewer is not for diagnostic viewing/reading on mobile devices in the USA. Please refer to your sales representative whether the product is available for your country. Diagnostic reading of images with a web browser requires a medical grade monitor. For iPhone and iPad country-specific laws may apply. Please refer to these laws before using for diagnostic reading/viewing. For Japan: Applications on iPhone / iPad / iPod are not a medical device in Japan. Use at your own risk. They are not intended to be used for diagnosis.
	The *syngo.*via General Engine provides functionalities for highly efficient reading and reporting of routine to advanced cases and comprises the software modules ALPHA technology and *syngo.*via Advanced Reporting. The ALPHA technology speeds up the workflow by automating and standardizing reconstructions and improves consistency in image presentation. Anatomical Range Presets powered by ALPHA technology automatically initialize ranges and projections with respect to the underlying anatomy. Practically eliminating the need for manual interaction, this feature supports consistent results, efficient procedures, and diagnostic confidence. The *syngo.*via Advanced Reporting is a set of features for merging 3D reading with flexible reporting. It enables efficient and structured management and communication of *syngo.*via results. Findings from different workflows can be combined in a single document. Print layouts can be flexibly selected. Formatted content and images can be easily copied from the *syngo.*via Report as RTF into a diagnostic report or can be sent as a pdf-document* with an HL7 message to an information system. And the *syngo.*via Report can be distributed to PACS as DICOM SC image. In addition, *syngo.*via Advanced Reporting provides tools for easy creation and administration of report templates. So you can easily edit and create sections and picklists and quickly create your own report templates or customize default templates for your institution. Irrespective of modality or clinical field, *syngo.*via General Engine offers many benefits: - Faster case preparation as manual interaction usually not needed - Consistent result quality across users and patients - Flexible combination of diagnostic results to provide the full picture in one document - Easily report incidental findings in a structured way - Having the full diagnostic picture is basis for appropriated treatment selection and patient satisfaction * Prerequisite for embedded pdf in HL7 message: - Licenses for HL7 Patient Information Reconciliation (PIR) AND Report Export for *syngo.*via - Implementation respectively: PACS/RIS-Driven Implementation Package, PIR Configuration and Report Export Configuration
·	The PACS-Driven Implementation Package includes the following tasks: - Activation of Siemens Remote Services connections - Import of all *syngo.*via server license files - Basic clinical configuration and integration of up to 5 DICOM nodes in *syngo.*via, such as one modality, one PACS, not more than two *syngo* MultiModality Workplaces, one printer, or one RIS/ DMWL-source including the request of a DICOM Modality Worklist sent to *syngo.*via for a networked Siemens scanner. All nodes need to be validated for connection with *syngo.*via. - Installation of a software upgrade and a *syngo.*via client on one formerly installed *syngo* MMWP, already configured in *syngo.*via as a DICOM node;

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	- Configuration DICOM access to *syngo.*via in *syngo* MMWP; 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.
	- *syngo* MMWP versions 2009B (VE36A) onwards with service pack VX29A support *syngo.*via client integration and remote desktop access using *syngo* Expert-i. *syngo* MMWP version 2009B (VE36A) when used in dual monitor configuration needs to be upgraded to *syngo* MMWP versions 2012A (VE50A) or higher.
	- Frontend integration of *syngo.*via with one PACS workplace (for image call-up directly out of the PACS application user interface)
	- Integration of *syngo.*via into the IT infrastructure using an existing Active Directory, consultation of the customer's IT administrator for routing/ports.
	- Configuration of basic workflow rules: autodelete, archiving, autorouting in *syngo.*via
	- Acceptance Test in cooperation with the customer
	Context of the implementation tasks:
	- The DICOM conformance of the DICOM nodes is 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 DMWL-source must be able to provide the DMWL to *syngo.*via identical to the DMWL provided to the modalities.
	- 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.
	- 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, or the distribution of the frontend integration to additional PACS workplaces are performed by the customer's administrator or can be ordered from Siemens separately as an option.
	- Implementation of a new *syngo* MMWP 2010B (Hardware and Software) or a *syngo* MMWP software upgrade to an on-site already installed sMMWP is performed as an additionally offered service.
	- The image call-up implementation and configuration will be upgraded by the customer with future software versions of the calling application (RIS, PACS).
	- Project coordination is performed by Siemens. Please see the *syngo.*via Data Sheet for system requirements and detailed description of implementation tasks.
	Brief description Type: Hewlett Packard server-based workstation Processor: 1x CPU RAM: 32GB or more System Disk: RAID Level 1 Data Disk: RAID Level 5 Gross Image Storage: approximately 500 GB Optical drive: CD/DVD-RW

Part No. / Product	Description
	Graphical Processing Unit: NVIDIA GPU Operating System: Windows Server 2012 R2 Standard **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 Extended 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 perfomed by HP. - Content of the Extended 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: 24.1" Brightness: 320 cd/m² Contrast ratio: 1000:1 DICOM calibration: with bundled RadiCS LE quality control After-sales service: 3 years swap service
	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)

Part No. / Product	Description
	- 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.
	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.
	The objective of this course is to give the participants the necessary theoretical knowledge and practical skills to routinely work with syngo.via and to become acquainted with the settings and configuration options of the system. Target Group This course is designed for clinical administrators, technologists and physicians who act as departmental key user for the syngo.via system. Learning Target syngo.via is a software solution intended to be used for viewing, manipulating, communicating and storing medical images. It supports interpretation and evaluation of examinations within healthcare institutions for example in Radiology, Nuclear Medicine and Cardiology environments. Having attended this course the participants will be able to comprehensively utilize the syngo.via basic operation and universal functionality. In addition the participants will get familiarized with the syngo.via configurations and setting options for applications, workflow and reporting issues.

Part No. / Product	Description
(Continued)	Prerequisite Basic application knowledge on imaging systems like CT, MI and MR Understanding of clinical workflow Basic understanding of IT and DICOM Contents syngo.via system overview, basic principles and user interface Demonstration and exercises on Patient Browser Worklist management Workflow management 2D/3D/4D image processing and evidence document generation Transfer of data Clinical configuration and setting options User management Duration 5.00 days
	syngo.via is the latest product from Siemens Healthcare for Advanced visualization of 2D/3D/4D data sets. This server client system is fully embedded in the customers IT infrastructure and allows access to information from anywhere to any modality and supports the user with appropriate, time saving reading workflow according to modality and disease. Having attended this course, the participant will understand the workflow and implementation concept of syngo.via. In practical exercises he learns to use the Service UI and is prepared to perform the administrative tasks. In addition basic first level support questions are covered. Target Group IT Administrators syngo.via responsible for local user management, regular maintenance tasks and first level service support Learning Target syngo.via is the latest product from Siemens Healthcare for Advanced visualization of 2D/3D/4D data sets. This server client system is fully embedded in the customers IT infrastructure and allows access to information from anywhere to any modality and supports the user with appropriate, time saving reading workflow according to modality and disease. Having attended this course, the participant will understand the workflow and implementation concept of syngo.via. In practical exercises he learns to use the Service UI and is prepared to perform the administrative tasks. In addition basic first level support questions are covered. Prerequisite Basic understanding of clinical workflow Basic IT know how Basic DICOM knowledge Contents Overview of the Enterprise Platform and syngo.via IHE, Infrastructure and Function View Client install Workflow configuration Service UI Trouble shooting Tools Notice Virtual training course for USA- No travel required Duration 2.00 days