

3016 HD 16 Slice CT Scanner



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

3016 HD

Precision treatment is a kind of medical technology based on the genetic level the accuracy of disease diagnosis, treatment and prevention, which is a widely industrail recognized direction of medical development



Medical imaging can provide precision medical information for diagnosis, under this background, Analytical innovatively launched precision CT platform. Via the breakthrough design of precise hardware, precise technology and precise image,3016 HD can realize the precise imaging and tissues to human body, as well as precise localization and qualitative diagnosis of small lesions.

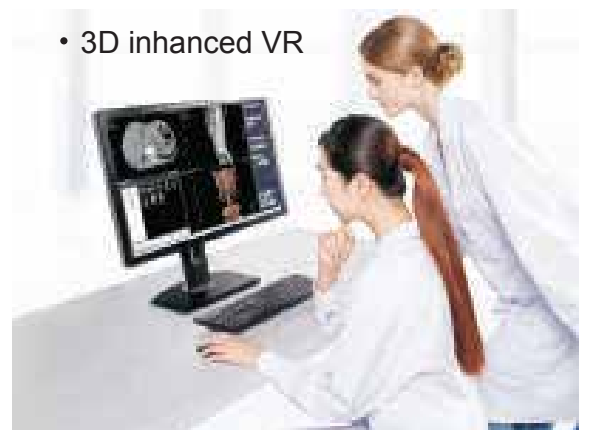
Seamlessly upgradeable to meet your needs in the future



Concering of the rapid development of medica l and health industry, Analytical is taking into full consideration the needs of your future development.3016 HD was designed seamlessly upgradeable to 3016 64 Clarity and 3016 64 Precision which can broaden the hospital clinical application range and improve your clinical confidence. This can achieve the hospital today's and tomorrow's win-win situation in economic and social benefits.

Precise hardware, Precise technology, Precise imaging

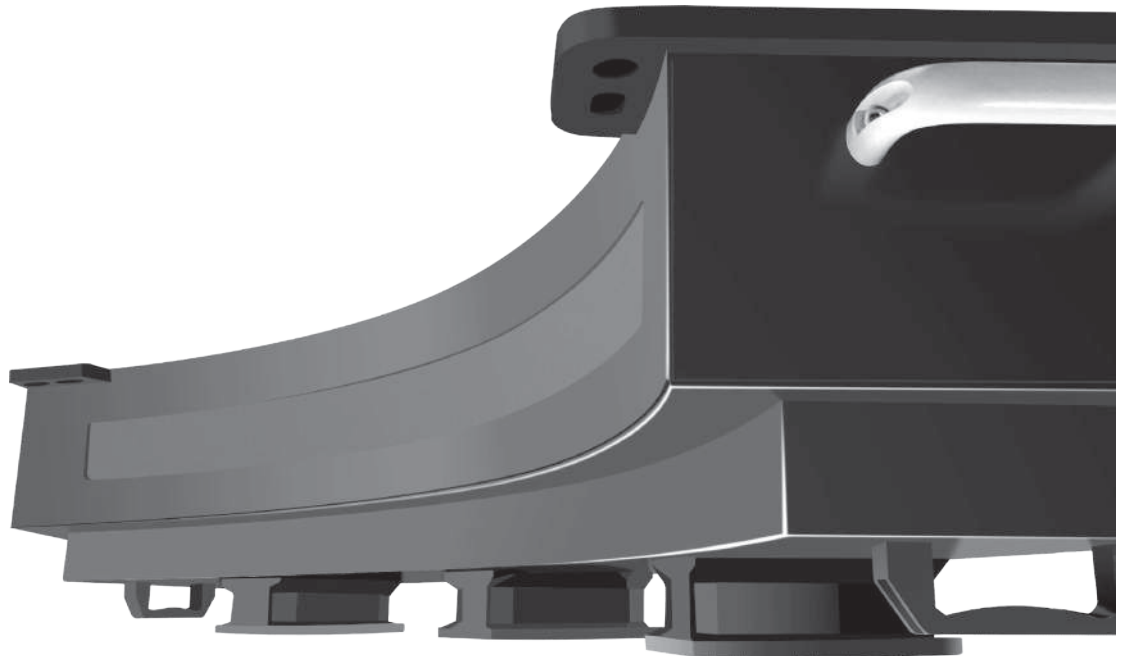
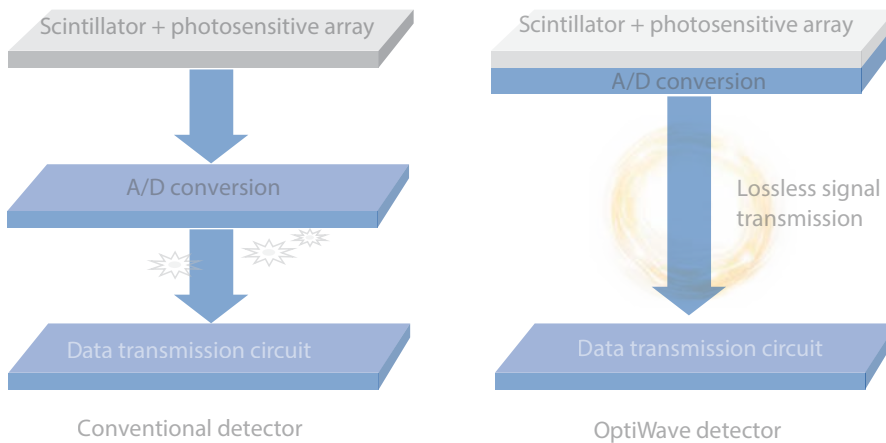
- OptiWave detector
- High precision gantry control
- Dual-mode gantry tilt
- Admir^{3D} iterative technology
- Dual-energy head imaging
- 1024 x1024 matrix imaging technology
- High-definition imaging of targeted organs
- Low dose platform
- 3D inhanced VR



Precision Technology Platform

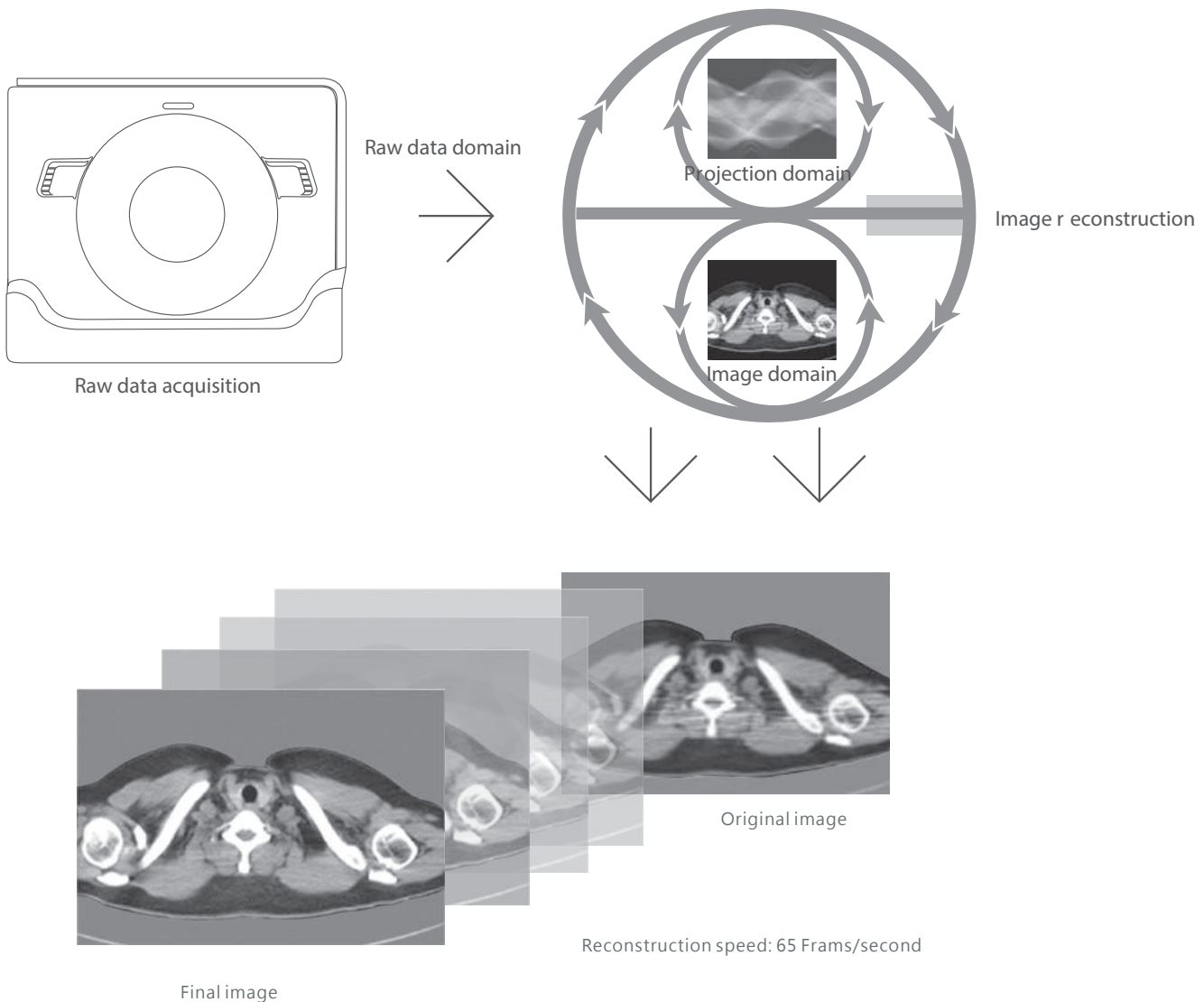
3016 precision technology platform is equipped with industry leading imaging chain system, and adopts OptiWave light detector, Ahead dual-energy imaging, Admir3D iterative reconstruction technology and AccuTilt dual-mode tilt gantry technology to provide powerful support for accurate diagnosis

OptiWave Detector



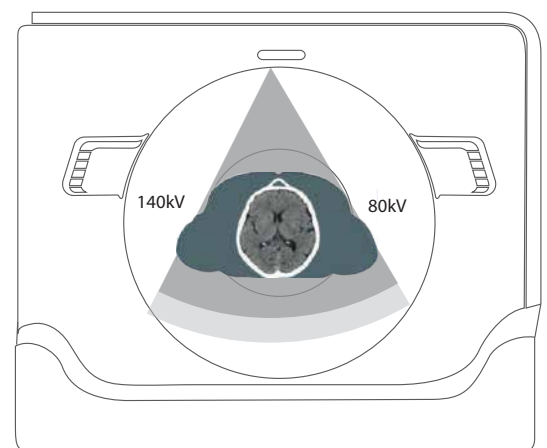
Admir3D iterative reconstruction technology

Mathematical model of Admir3D is applied accurately to construct and describe the photon characteristics of the signal. Iterative operations are performed based on three domains of raw-data, projection and image which greatly reduce the image noise and optimize the image quality under low dose.

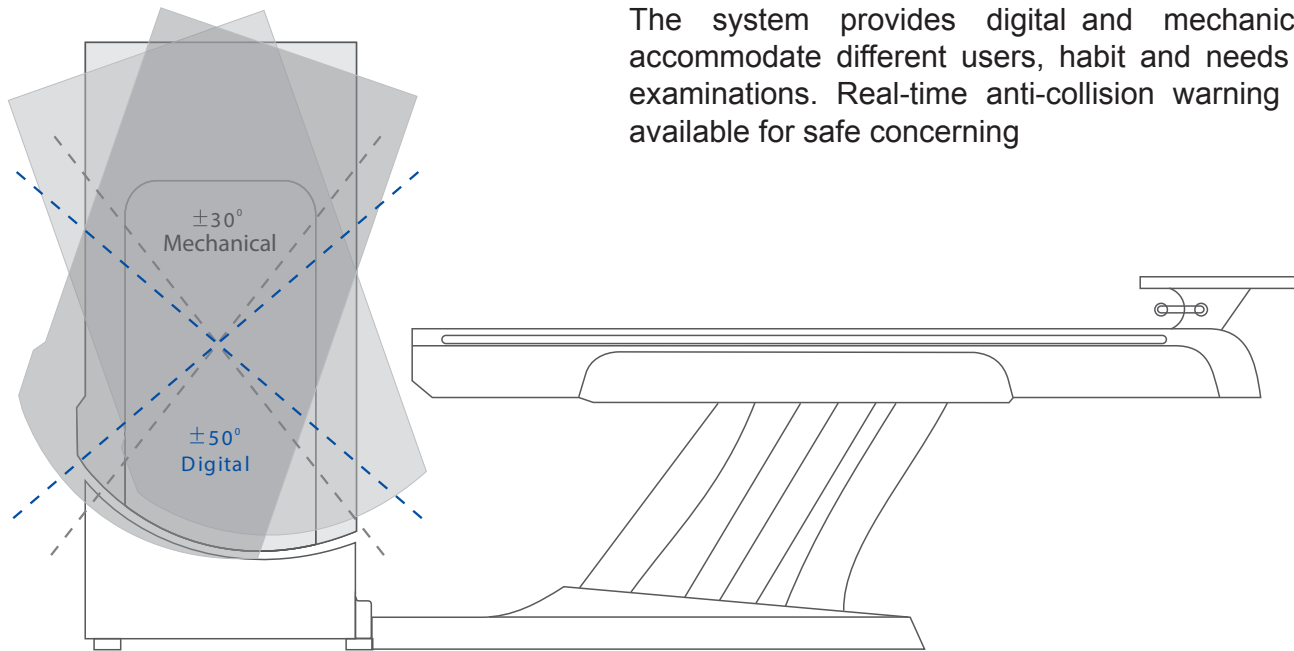


Ahead-Head dual-energy imaging technology

Ahead creatively uses 140kV and 80kV dual-energy switching scan mode for brain imaging, respectively, using high and low energy characteristics to obtain excellent resolution image and accurately identify subtle lesions



AccuTilt-Dual-mode gantry tilt technology

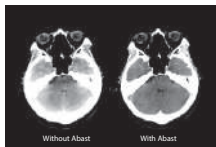


The system provides digital and mechanical tilt to accommodate different users, habit and needs of clinical examinations. Real-time anti-collision warning system is available for safe concerning

AccuOrgan-Targeted organ imaging

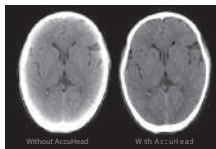
Abast-Bone artifact suppression technology

Abast eliminates the X-ray beam hardening effects to the cerebellum, brain stem and other parts of the brain. And clearly shows the structure and lesions of the brain stem and cerebellum.



AccuHead-Gray & white matter enhancement technology

AccuHead is designed, respectively, for processing head image data of intermediate frequency and low frequency signals to improve the contrast of the tissue without increasing the noise, so as to obtain better contrast of the gray & white matter



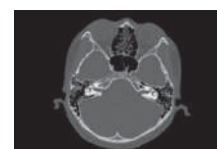
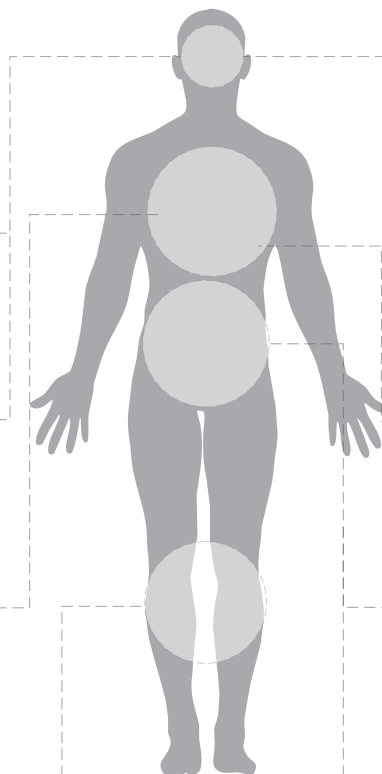
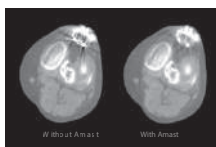
AccuOrgan- High resolution lung imaging

High resolution images of the lung are obtained only by using 30%~40% of conventional radiation dose



Amast-Metal artifact suppression

Dual-domain iteration is adopted to effectively remove metal artifacts to restore the soft tissue around the metal



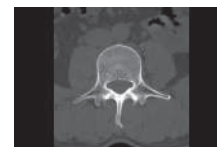
AccuImage - Microscopic imaging technology

1024x1024 matrix to display more details of the pathological changes and provide a reliable basis for early detection, early diagnosis and early treatment of the diseases



AccuOrgan - Inner ear imaging

Professional high resolution inner ear imaging clearly to show the cochlear vestibular, semicircular canals and other fine anatomical parts, ensures the detection rate of small lesions



AccuBone-High resolution bone imaging

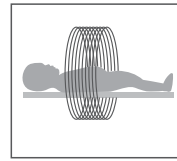
Enhanced lesions edge contrast can provide accurate anatomic relationships and show early destruction and cyst of subchondral bone like lesions and articular cartilage calcifications



AccuOrgan -Body high resolution imaging

Combined with the AccuImage microscopic imaging technology, significantly to increase the display of fine structure and morphology of the abdomen and provide more accurate images for the early diagnosis of small lesions

AccuDose-Comprehensive low dose imaging

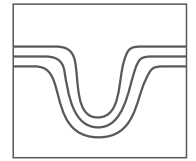


Pediatric scan protocol

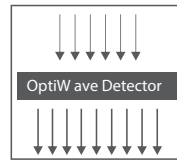


CTDIW warning

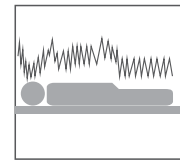
Over dose warning



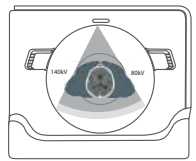
AccuShape collimator



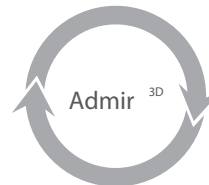
Efficient detector



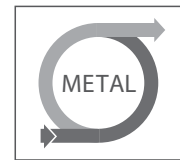
Adose dose modulation



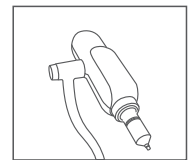
Ahead - Head dual-energy imaging



Iterative reconstruction



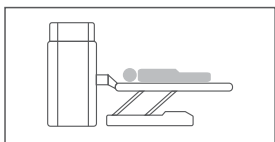
Amast



Contrast agent tracking technology

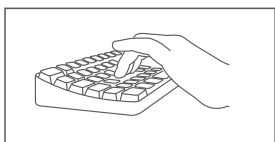
AccuScan Convenient and efficient process, enjoy easy

Convenient and efficient operation process, greatly improve work efficiency to achieve high throughput of patients



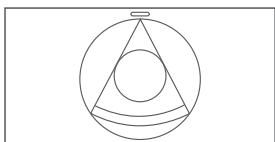
AccuOrientation

Preset intelligent placement procedures, one-button for accurate positioning



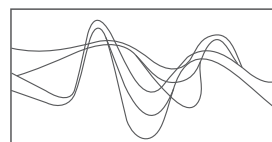
AccuEmergency

Free of registration for emergency, quick to start scan



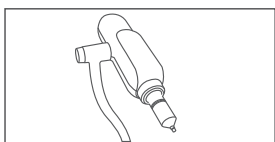
AccuScanning

Default scan protocols, easily to get high resolution images



AccuReconstruction

Up to 65 frames / sec real-time reconstruction speed



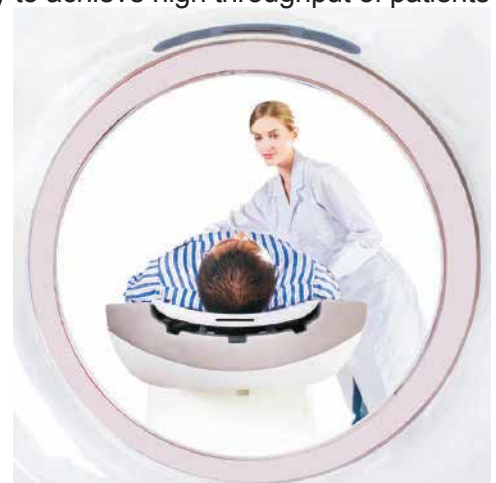
AccuTracking

Contrast agent automatic tracking, precise triggering



AccuPrinting

Quick printing, intelligent typesetting, time saving



Clinical Applications

Fast, precise and low-dose imaging provide a full range of clinical solutions to meet the current and future clinical diagnostic needs of the hospital



Technical Specifications

3016 HD Multi-slice spiral CT scanner parameter

No.	Technical feature	Description
1	Gantry	
1.01	Gantry type	Low voltage slip-ring with AccuSlip-ring technology
1.02	Gantry driven type	Strap-driven
1.03	Patient opening	70cm
1.04	Gantry tilt mode	Dual-mode gantry tilt
1.05	Mechanical tilt capability	±30°
1.06	Digital tilt capability	±50°
1.07	Gantry remote-Control	Provided
1.08	Detector type	OptiWave rare-earth ceramic detector
1.09	Numbers of detector rows	32
1.10	Width of Z-axle detector	20mm
1.11	Detector columns of channels per row	912
1.12	Numbers of detector columns	29184
1.13	Data-transfer type	RF, optical fiber communication
1.14	3D laser orientation	Provided
1.15	External X-ray enable	Interface for Foot-Pedal Provided
1.16	Automatic exposure control (mA Modulation)	Provided
1.17	Auto-voice manager	Breath Graphical Display Hold Message (Record/Playback) Breath Message (Record/Playback)
1.18	Analytical energy conservation management	Provided
1.19	Acquisition mode	16 × 0.625mm, 16 × 1.25mm
2	Scan parameter	
2.01	Shortest 360 degree rotation time	0.5s
2.02	Allowed rotation times	0.5s, 0.8s, 1.0s, 1.5s, 2.0s

2.03	Slice numbers per rotation	16
2.04	Minimum slice thickness of scan	0.625mm
2.05	Minimum slice thickness of reconstruction	0.625mm
2.06	Maximum slice thickness of scan	10mm
2.07	Nominal reconstruction slice thickness	0.625mm, 1.25mm, 2.5mm, 5.0mm, 7.5mm, 10mm
2.08	Speed of image reconstruction (512×512)	65 frames/s
2.09	Scan FOV	52cm
2.10	Image reconstruction matrix	512×512, 1024×1024
2.10	Image reconstruction matrix	512×512, 1024×1024
2.11	Image display matrix	512×512, 1024×1024
2.12	Maximum continuous scan duration	120s
2.13	Maximum continuous scan length	180cm
2.14	Direction of TOPO	Front-back, Left-right
2.15	Max. length of TOPO	180cm
2.16	Range of pitch	0.5~1.5
2.17	Scan mode	Scout scan Axial scan Helical scan Cine scan
3	HVPS and Tube	
3.01	Maximum continuous output of HV generator	50kW
3.02	Tube kV selections	80kV, 100 kV, 120 kV, 140 kV
3.03	Tube mA range	10~420mA
3.04	Tube anode heat capacity	5.0MHU
3.05	Heat dissipation rate	815kHU/min
3.06	Type of cooling	Oil cooling + Air cooling
3.07	Tube focus	Large: 1.1mm×1.0mm Small: 0.5mm×1.0mm
3.08	Dynamic flying focal spot technology	Provided

4	Patient table	
4.01	Maximum horizontal-movable range	1850mm
4.02	Table horizontal-scannable range	1800mm
4.03	Table horizontal-position repeatability	±0.25mm
4.05	Maximum vertical-movable range	500mm
4.06	Maximum speed of vertical movement	20mm/s
4.07	Maximum speed of horizontal movement	150mm/s
4.08	Maximum patient weight	205kg
4.09	Foot pedal of patient table control	Provided
5	Image Quality	
5.01	High contrast resolution	21lp/cm@0%MTF
5.02	Low contrast resolution	2.0mm@0.30%
5.03	Isotropic imaging resolution	0.625mm
5.04	Range of CT numbers	-32767~32768
5.05	Image noise	≤0.25@28mGy
6	Computer subsystem	
6.01	CPU	3.5GHz
6.02	Memory	16GB×4
6.03	Storage of hard-disk	1T×2
6.04	Monitor	24" LCD Monitor
6.05	Resolution of monitor	1920×1200
6.06	Image-data external storage type	CD/DVD/USB
6.07	Time of image reconstruction (512×512)	15.4ms/frame
6.08	DICOM 3.0 interface	Provided
6.09	Printer DICOM 3.0 interface	Provided
6.10	Auto filming	Provided
6.11	Worklist function	Provided
7	Advanced application	

7.01	Multi-Planar Reconstruction (MPR)	Provided
7.02	Curve Multi-Planar Reconstruction (CPR)	Provided
7.03	Surface Shaded Display (SSD)	Provided
7.04	Volume Rendering (VR)	Provided
7.05	Maximum Intensity Projection (MIP)	Provided
7.06	Minimum Intensity Projection (MinIP)	Provided
7.07	Virtual Endoscopy (VE)	Provided
7.08	CT angiography (CTA)	Provided
7.09	Tissue segmentation	Provided
7.10	One click bone remove	Provided
7.11	One click patient table remove	Provided
7.12	Bolus-tracking Technology	Provided
7.13	Spiral auto start	Provided
7.14	Cine display	Provided
7.15	Abast™ bone artifact suppression technology	Provided
7.16	Amast™ metal artifact suppression technology	Provided
7.17	Admir ^{3D} full-domain iterative reconstruction	Provided
7.18	Low-dose pediatric scan technology	Provided
7.19	Low-dose lung scan technology	Provided
7.20	AccuHead grey-white matter enhanced technology	Provided
7.21	AccuLung high resolution scan technology	Provided
7.22	AccuOtica inner-ear high resolution scan technology	Provided
7.23	AccuBody high resolution scan technology	Provided
7.24	AccuBone high resolution scan technology	Provided

Regulatory compliances



Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



Analytical Foundation

1. Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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