



2001 Toshiba Asteion 4 Multi Slice CT Scanner

System Configuration:

Gantry

Geometry: Rotate – rotate Slip ring
No./Type Detectors 896 ch x 22 rows, solid state
No. Detection Channels 4 x 896
Scan Times, Sec
360 Degree 0.75, 1, 1.5, 2, 3
Partial 0.48
Slice Thickness 4 x 0.5,1,2,3,4,5 mm
X-ray Fan Beam Angle 49.2 Degree
Gantry Tilt +/- 30 Degree
Gantry Aperture 72 cm
Scan Localizer Laser

X-Ray Tube

As of the last PM on 7/2/10, the counts are:
Tube Count - 42,503
Gantry Count - 1,228,714
X-ray Tube Anode Heat Storage 4 MHU
Dissipation Rate Maximum 864 kHU/min
Tube Cooling Oil/Air
Tube Focal Spot 1.4 x 1.4, 0.9 x 0.7 mm

X-Ray Generator

kW Output 48kW
kVp Range 80,120, 135 kVp
mA Range 10-400 mA (10 mA increments)
Spiral Scanning Yes
Max Scan Time, 100 seconds
Max Scan Volume 175 cm
Spatial Resolution, lp/cm 18 @ 0% MTF
Pitch 0.83-53.3 mm/sec
Reconstruction Time 0.25 seconds

Patient Table

Range of Movement
Vertical 30-85 cm
Longitudinal 219 cm
Scannable Range 180 cm
Max Load Capacity w/ Accuracy 450 lbs +/-0.25mm

Image Processing

Computer CPU Not Specified
Scan FOV's 18, 24, 32, 40, 50 cm
Reconstruction Matrices 512 x 512
Reconstruction Time Per Slice 0.25 second
For Localization Scan Real-Time

Display

Monitor Size 18" Color LCD
Matrices, Pixels 1280 x 1024
Range of CT Numbers -1536 to 8191
Image Enlargement 20x
Max No. of Slices Displayed at Once 16

Image Storage

Hard Disk 18 GB (raw data 36 GB)
No. Online Images 16,000
Archival Storage 4.8 GB, 2.6 GB MOD

Performance

Minimum Interscan Time 0 Seconds
Dynamic Scan Rate 133 scans/100 seconds
High-contrast Spatial Resolution
0% MTF, lp/cm, 18 lp/cm, 50% MTF, lp/cm 8 lp/cm
Low-contrast resolution,
mm at% at 4 rads 2mm @ 0.3%
Noise, % at 2.5 rads <0.5%
DICOM 3.0

