

VA Hampton Medical Center

SUPPLY WAREHOUSE B60022

V.A. Medical Center

SUPPLY BUILDING #27

AVERILL DRIVE

HAMPTON, VA 23667

System includes:

Elevating Open Construction Float-Top Radiographic Table

Table top dimensions (LxW)	2410mm x 812mm
Elevating (Up/Down) range	545~900mm
Longitudinal travel (Left & Right) +-	480mm
Transverse Travel (Front & Rear) +-	140mm
Max. patient weight	220kg
Elevating from min. to max height	40mm/sec
Foot switch	Wireless foot switch
Auto Tracking	Longitudinal tracking of detector w/ longitudinal travel and rotation of tube
Auto Centering	Automatically adjusts and centers detector and the tube
Shared Bucky	S4343-W & S4335-W available on a bucky

FPD (Wireless S Detector)

The ultrasensitive FPD (Flat Panel Detector), developed based on Samsung Electronics' outstanding TFT technology, features proprietary ALDAS (Advanced Low Dose Amorphous Silicon Sensor) technology. ALDAS improves patient safety and the reliability of the diagnosis by acquiring high-resolution images with a very small amount of radiation

Detector type	Amorphous Silicon TFT/Cesium Iodide Scintillator (CsI)
Dimensions (Active field)	17" x 17" (43cm x 43cm)
Active detector matrix	3036 x 3040 pixels
Effective area	425.04mm x 425.60mm
Pixel pitch	140µm
A/D conversion (Pixel depth)	16bits gray scale
Dynamic range	>14000LSB
Spatial resolution	3.57 lp/mm

Detective Quantum Efficiency (DQE)	80% (0.1lp/mm) typical
Modulation Transfer Function (MTF)	85% (0.5lp/mm) typical
Battery Charging Time	6 hrs (tethered) – 3 hrs (charger)
Battery Life	160 Images for 4 hrs
Installation	Wireless/Tethered
Weight	3.7kg

FPD (Wireless S Detector)

Digital Detector

Detector type	Amorphous Silicon TFT/Cesium Iodide Scintillator (CsI)
Dimensions (Active field)	17" x 14" (43cm x 35cm)
Active detector matrix	3040 x 2466 pixels
Effective area	425.6mm x 345.2mm
Pixel pitch	140µm
A/D conversion (Pixel depth)	14bits gray scale
Dynamic range	> 14000LSB
Spatial resolution	3.57 lp/mm
Detective Quantum Efficiency (DQE)	73% (0.1lp/mm) typical
Modulation Transfer Function (MTF)	84% (0.5lp/mm) typical
Battery Charging Time	6 hrs (tethered) - 3 hrs (charger)
Battery Life	160 Images for 4 hrs.
Installation	Wireless/Tethered
Weight	3.1kg

DGR-ACCSDC/US – Battery Recharger

Dimension

208mm x 155mm x 65mm (WxDxH)

Weight

1.2kg.

DGR-ACCSBD/US – Battery 2 Each

Dimension

98mm x 57mm x 28mm (WxDxH)

Weight

0.14kg

Large Integrated Digital Workstation

Post Image Processing Technology ALCOS (Adaptive Local Contrast Stretching)

ALCOS is an outstanding post image processing technology that automatically determines suitable image conditions depending on the target body parts and tissues. This proprietary technology provides qualified images for diagnoses by applying high resolution image contrast and edge sharpness enhancement functions. Users can acquire more accurate imaging data at a faster speed, which ultimately leads to a highly productive medical environment.

Imaging Workstation – XGEO Station

Hardware

- | | |
|--------------------|--------------------------------------|
| - CPU | Intel Xeon Processor (3.60GHz, 10MB) |
| - RAM | 8GB |
| - HDD | 1TB |
| - Operating system | Windows 7 Pro |
| - Accessories | Keyboard, Mouse |
| - Monitor | Full HD 21" LCD Monitor (1920x1080) |
| - CD/DVD recorder | For digital image storage on CD/DVD |

Software

- | | |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - Image acquisitions times** | S4343-W (Wireless Mode) :
Preview 2.3 sec, final image 7.8 sec
10sec (Tethered, Wireless Mode) |
| - AED function Cycle time | |
| - Repeat Analysis | |
| - Post Processing | S-Vue |
| - Auto Cropping | Auto shutter |
| - Display functions | Window Level Control,
Zoom/Magnifier, Flip/Rotate, Invert
Shutter (Fixed/Auto/Manual)
Annotations (Marker/Free
Text/Arrow/Line/Length/Angle/Cobbs
Angle/ Rectangle/Ellipse)
Layout (1x1, 1x2, 2x1, 2x2) |
| - Multi Language (workstation only) | English, French, German, Italian,
Spanish, Russian, Simplified
Chinese, Portuguese, Turkise,
Finnish |

Network Specifications

- | | |
|----------------------------|----------------------------------------------------|
| - DICOM Verification | |
| - DICOM Modality Worklist | Interface with HIS/RIS with auto
refresh option |
| - DICOM MPPS | Send the status of exams to HIS/RIS |
| - DICOM Storage | Send image (DX or CR IOD) and
GSPS to PACS |
| - DICOM Storage Commitment | |
| - DICOM Grayscale print | Support DICOM printers |

- | | |
|------------------------------------|-----------------------------------------------|
| - DICOM Query/Retrieve | Query and retrieve DX and CR images from PACS |
| - DICOM GSPS | Send overlay information along with image |
| - DICOM Media Exchange (DICOM DIR) | Patient images export to DVD/CD |

Remote Control System

Intelligent Soft Handling Ceiling Mounted Tube Suspension

Overall workflow is improved by allowing the user to position the Ceiling Mounted Tube Suspension manually with the aid of Soft Handling Power Assist or Full Automatic Robotic operation. Integrated collimator, 12" Touch Screen with Intuitive Graphic User Interface.

Collision Avoidance System

Senses obstruction in path of travel and stops until obstruction is removed

Auto Parking & Positioning

S-Align Provides Precise Alignment for Superior Imaging

Automatic Tilting Wall Stand

Up/Down range	400~1800mm (Motorized & Manual)
Detector tilting	-20~+90 Degrees
Detector rotate range	0~+45 Degrees

Automatic Collimator with 4-way Independent Blade Control

Collimation control Manual or Automatic

When scanning an area that is smaller than the area of the FPD, the individual Blade control moves the four axis of the area to lower unnecessary radiation exposure. This function is especially effective when scanning the chests of children.

Smart Stitching Allows for Table and Wall Stand Procedures

Average acquisition time for a 3-images exam < 15sec (Table)
< 15sec (Stand)

Image pasting and processing time for a 3-image exam
< 15sec from last exposure

Automatic Exposure Control (AEC)

Minimum Response Time	Less than 1 mS
Output Sensitivity(Gain Range)	Adjustable 0.046 ~ 0.91 V/ μ Gy @76 kV. Additional output sensitivities available upon request
Ionization Chamber Potential	+75 VDC \pm 10 V (internally generated)
Output Reproducibility	Less than \pm 0.045 Coefficient of Variation
Output	Linear ramp with no more than \pm 5 % deflection in full output scale.
Field Matching	Outputs of multi-field chambers are individually adjustable to within 5 % of one another.
X-ray % Transmission	No less than 85 % from 50 kV to 150 kV with 2.5 mm to 3.0 mm total aluminum equivalent beam filtration from the x-ray tube and collimator
Power Supply Requirement	\pm 11.4 VDC ~ \pm 15.75 VDC @ 0.1 A unless specified otherwise
Operating temperature	10 ~ 40 $^{\circ}$ C
Operating Humidity	10 ~ 60 % relative humidity non-condensing
Operating Atmospheric Pressure	860 ~ 1060 hPA
Transport and Storage Temperature Range	-40 ~ 70 $^{\circ}$ C
Transport and Storage Humidity Range	10 % ~ 95 % relative humidity non-condensing
Transport and Storage Atmospheric pressure	860 ~ 1060 hPA

Dose Area Product (DAP)

DAP (Dose Area Product) measures the amount of radiation delivered with each exposure and can be interfaced to PACS.

Chamber voltage 300V

Distance of the electrodes 6mm

Stabilization time 5min

Scatter Radiation Grid

Patient table

460mmx460mm, 215lp/inch,10:1,
SID 100cm, Carbon cover

Wall stand*

460mmx460mm, 215lp/inch,
10:1, SID100cm, 130cm or 180cm,
Carbon cover

82 KW High Frequency Generator

X-Ray generator designed for complete integration to Digital Workstation,
for easy operator use.

Max. output

82kW, 150kVp, 1000mA

Exposure voltage

40~150kV (1kV step)

mA range

10~1000mA

Time range

0.001~10sec

Reduce Energy Usage with the Samsung Save-Power Mode

Procedure Positioning Help

The visual guide provides various scanning positions to help the Technologist acquire images easily when performing unfamiliar procedures

2 Copies of Operator's Instruction Manual
2 Copies of Complete Technical Service Manual
2 Copies System Manager's Manual

3.5 Days On-Site Key Operator Training