REQUISITION: 648-B98030

REQUESTING SERVICE: IMAGING SERVICE
SHIP TO: VAMC PORTLAND
V.A. Medical Center
GENERAL WAREHOUSE
3710 SW VETS. HOSP. RD.
PORTLAND, OR 97239

Qty	Item #	Description
1		**Sonialvision G4 Package with w/Single Panel DR 701C Wireless**

SHIMADZU SONIALVISION™ G4 UNIVERSAL SYSTEM
A new premium R/F system that offers completely superior ergonomic design and highest user confidence. 17x17 inch Large FOV and 139 micron pixel size FPD mean leading-edge digital imaging and fine image quality. Various features of dose reduction and dose management provide an important aspect of radiology imaging. The SONIALVISION G4 will make your x-ray room the most productive and efficient by covering a wide range of x-ray examinations both R/F as well as, digital radiography.

Features include:
Ultra high image quality and large field FPD
• 17x17 inch 139 micron pixel pitch FPD.
Large Patient Coverage
• 79.7 inch (202.5 cm) of longitudinal movement. This is accomplished by imaging chain, not table movement at any table angle
• Completely flat Tabletop with no side frames adds to comfort and imaging Multi-functionality to perform many procedures
• This system has been thoughtfully designed to be ideal for a wide range and variety of examinations, such as orthopedics, general radiography. Barium studies, endoscopy, urology, angiography, pediatrics, and bariatrics.
• Urology mode realizes the unique table tilting with fixing the height of ROI and asymmetric collimation feature to keep the imaging field at the very end of tabletop.

Comprehensive Dose Care
• Grid controlled Pulsed fluoroscopy reduces doses.
• Three beam hardening filters are provided as standard to efficiently remove unnecessary soft X-rays that do not contribute to image quality. The optimal BHF is selected to suit the examination automatically to ensure the lowest dose

• A new auto filtering collimator R-300 has three kinds of beam hardening filters which cut unnecessary soft x-ray.
• G4 has "Dose Eye" collimation which allows the user to collimate even further to the minimum field by Iris collimation and asymmetric collimation.
• On the LIH (Last Image Hold) you can set the collimation for the next fluoroscopy "virtual collimation".
• Grid can be removed to lessen dose in pediatrics or exposure to thin body parts.

Totally Redesigned Digital Imaging Console
• New DR-300 has state-of-the-art digital image processing technology and acquires radiography images while keeping original high resolution matrix.
• The digital unit has integrated system for examination and image processing
• Touch panel console offers essential information which is clearly visible to users making exam execution and completion easier.

SURE Engine Advance
• SONIALVISION G4 has an advanced digital imaging filter which contributes to noise reduction by using recursive filters and software driven image outputs to minimize halation and optimize imaging parameters.

Universal Tilting/Elevating Radiographic / Fluoroscopic table ZS-200 with the following features:
• 90 Degree Vertical to 90 Degree Trendelenburg with continuously variable speed tilt
• Soft start and stop inverter drive motors
• Maximum tilt speed 90 degrees in 17 seconds
• Flat 235 X 76.5 table top
• Carbon fiber reinforced plastic (CFRP) table top for low attenuation
o 0.8 mm of AL eq.
• Longitudinal Imaging chain movement:
o Longitudinal range of imaging chain: 63.2 inches (160.5 cm)
o Tube Arm speed: 5.9inches/sec (15 cm/sec) continuously variable
• Lateral Table to movement:
o 9.8 inches (25 cm) for peripheral studies
o Variable speed,; 2.0 inches/sec (5.0 cm/sec) (max)
• Table top elevation range:
o 18.5 to 43.3 inches (47 to 110 cm) from floor
o Allows maximum flexibility to load patients on and off of table
o With 18.5inches (47cm) of table height being the lowest position patients can easily reach the floor for stability and safety
• All Digital Carriage, without SPOTFILMER. Enables the following:
o Improved image quality
o X-Ray dose reduction
o Enhanced field of view (closer to patient)
• Table Weight: 3,440 lbs. (1,560 kg)
• Compact and ergonomic design allows mounting only 4 inches from back wall

Imaging Unit
• Imaging coverage max 79.7 inches (202.5 cm)
• Oblique angle of X-ray tube rotation +40/-40 degrees cranial-caudal and caudal-cranial to table FPD
• X-ray tube rotation angle Vertical: Counter clockwise 90 degrees to Off table Gurney, or Trendelenburg: Clockwise 90 degrees
• Dedicated inch mover for minor adjustments of imaging unit
• The edge of the imaging range can be positioned as close as 3.7 inches (9.5 cm) from the head end of the table.

Collimation
• Virtual Collimation; Enables to collimation of irradiation field by displaying the collimator position onto fluoroscopic LIH (Last Image Hold) image.
• Left and right asymmetrical collimator
• Octagonal (Iris) collimator
Additional Beam Hardening
• 0.1mm Cu
• 0.2mm Cu
• 0.3mm Cu

Dose Area Product (DAP)
• DAP Mounting Kit
• VacuDAP Dose Area Meter

Grid

• Ratio 10:1, Density: N 50 line/cm
• Focusing Distance 47.2 inches(120 cm)
• Interspace material: AL
• Removable Grid

Standard Accessories
• Footrest
• Shoulder rest
• Side hand grip, 1 pair
• Overhead hand grip
• Table Mattress
• Footswitch for fluoroscopy and radiography
• Intercom
• Grid Storage Rack
• SMILE Mat with Shimadzu "Global Strings" Design
• 9BCu Phantom

Swallowing Examinations
• Wheelchair or swallow patients can be examined by extending the imaging chain up to 150cm of SID

Stretcher Applications
The tube head can rotate 90 degrees at vertical position to image patients on the stretcher
500 lbs weight feature
• Table Fully Functional with Patient Load up to 500 pounds and 700 pounds in case that the patient is lying horizontally and stationary

Hygienic Smart Column
Integrated Tube Arm Features:
• Design allows for installation in a 107 square foot room with a 9 foot 6 inch recommended ceiling
o 8 ft 6 in Minimum Height (Some movement restrictions)
• With Table Vertical; X-ray tube Focus is 59.4 to 220 cm from floor.
• Tube Rotates +90 degree – 90 degree (motorized for stretcher work)
• Easy patient access from either side of the table
• Linear Tomography capability
o Exposure range FFD: 110cm, Horizontal, Vertical or at any table tilt angle from +90 to -90 degree
o Exposure angle 8, 20 30, 40 degree
o Speed maximum 2.5 second for 40 degree
o Layer height: 0 to 250 mm from the tabletop
• X-Ray Tube
• Fluoroscopic X-Ray Tube: 750kHU, 0.7 X 1.2 Focal, Grid Controlled Pulse Fluoroscopy

17x17" Flat Panel Imaging Detector
Shimadzu Flat Panel Detector Technology System
• Dynamic Flat Panel Detector
• Cesium Iodide (CsI) Scintillator
• 139 micrometer pixel technology for sharp diagnostic visualization
• DQE 70% +/- 5%
• Spatial resolution: 3.6 line/mm (Nyquist)
• 17 x 17 inch Full imaging field of view
• Acquisition frame rate: Max. 30 fps
• High resolution image acquisition with dose reduction
• Max 3032x3032 (17"x17") Spot Image Acquisition
• Max 3032x3032 (17"x17") Serial image Acquisition at 15 fps
• Images obtained as 16 bit data 65,530 graduations
• Stored with a digital processing device as 16 bit data without losing any image information
• FOV: 17x17" FPD provides the largest imaging area, and 5 selectable FOV (17x17,15x15,12x12, 9x9, and 6x6 inch) best in the market

UD150BC-40S Radiographic/Fluoroscopic High Frequency Inverter X-Ray Generator with the following features:
• High Frequency, 50 kHz inverter
• 80kW Radiographic Rating
• LCD Touch Panel
• Advanced Anatomical Programming with 800 programs
• Two-Point (kV / mAs) and three point (kV / mA / t) manual techniques and AEC / APR override capabilities
• Radiographic tube voltage 40-150 kV Continuous
• Radiographic Tube Current 10-1000 mA
• Time selection 0.001-10 seconds

• Radiographic; 0.5 to 800 mAs

• Fluoroscopic tube voltage 50 – 125 kV continuous
• Fluoroscopic Tube Current mA 0.3 – 20 mA
• Automatic Brightness Stabilizer
• Fluoroscopic Timer
• Exposure counter
• Anode heat calculator
• Two X-Ray tube compatibility
• Requires 480 VAC, Three Phase power or others available
• Automatic Exposure Control (AEC)
• High Speed Starter

DR-300 Shimadzu Digital System
Includes:
• Anti-Virus Software
• Fluoroscopy 1024 x 1024 matrix
• Auto-Calibration, and image quality analysis/measurement software
• High speed CPU
• Disk drive stores 10,000 images at 1024x1024
• Windows 7 operating system with intuitive graphic user interface
• PC keyboard and Mouse
• DVD-R drive; upto 2,000 images in DICOM Media Strage 1024 x 1024 matrix

Radiography
• SPOT Acquisition
• Serial Acquisition
• Milti-frame imaging: 2 or 4 split horizontally/vertically
• SUREengine Advance for Radiography
o The digital filters suppress the halation and loss of shadow details for SPOT Acquisition images

Fluoroscopy
• Pulsed Fluoroscopy at 30/15/7.5/3.75 fps
• Fluoroscopy Image Storage: Direct store/LIH (Last Image Hold) store/Loop Store, Up to 1,000 frames per run.
• Virtual Collimation
• SUREengine Advance for Fluoroscopy
o Real-time multi frequency processing
o Real-time flexible noise reduction

Processing
• Customizable fields allow exam settings to be pre-programmed to Individual doctor's specifications making for one-click exam setup
• Auto-image optimization
• Extensive group of post-processing features for optimal image quality
o Gamma Selection from 10 kinds of nonlinear contrast curve
o Recursive Filter Noise Reduction
o 13 x 13 Template filter processing Edge Enhancement
• Horizontal / Vertical Inversion
• Zoom up to x 4
• Multiple Image Display (2x2, 4x4)
• Annotation for overlay display text and figure
• Distance & Angle Measurement on the image

DICOM Communication
• DICOM 3.0 network includes
o DICOM storage class
o DICOM MWM (Modality Worklist class.)
o DICOM media DVD-R in DICOM format
o DICOM print class

Monitors
• Two 19 inch LCD Monitor for Procedure Room
• Two 19 inch LCD Monitor for Control Room

Standard Remote Control Console, Desktop Type:
ZS-200 RC-U, Built-in Kit
• All controls necessary for a given examination are gathered at the central touchscreen.
• Controls are customizable for each examination type and facility.
• Equipped with a 10.4 inch LCD touch panel
• Operator can view patient information or change fluoroscopic and radiographic conditions

Qty	Item #	Description	List Price	Disc. Price

• Mounts in customer's provided counter
Standard Remote Control Console, Desktop Type:
ZS-200 RC-S, outer frame for mounting
• All controls necessary for a given examination are gathered at the central touchscreen.
• Controls are customizable for each examination type and facility.
• Equipped with a 10.4 inch LCD touch panel
• Operator can view patient information or change fluoroscopic and radiographic conditions
• It sets on top of counter
Standard Remote Control console, cart type
ZS-200 RC-C, cart for console:
• All controls necessary for a given examination are gathered at the central touchscreen.
• Controls are customizable for each examination type and facility.
• Equipped with a 10.4 inch LCD touch panel
• Operator can view patient information or change fluoroscopic and radiographic conditions
• It built into a roll around cart

CXDI-701C Wireless Digital Radiography Detector for table, stretcher and tabletop work
• Wireless portable digital detector
• 14" x 17" full imaging field
• Sensor weight: 7.5 lbs
• Sensor size(WxLxT): 384 x 460 x 15 mm ISO4090 cassette compatible
• Amorphous Silicon Sensor (a-Si)
• CSi scintillator
• 125 micron pixel pitch
• 9.5 million pixels (2800 x 3408)
• 12 bit / 4096 gray scale (14 bits A/D)
• IEEE 802.11n Wireless Access point
• Equipped 2 batteries, 1 battery charger and power box as standard

CXDI-NE Control Software (Graphical User Interface)
• Canon CXDI-NE software, for panel operation, image processing enhancement, and image output
• Preview image in 3-5 seconds, refresh cycle up to 15 seconds
• 19" Touchscreen color LCD with mouse and keyboard
• DICOM 3.0 compatible, including Print Management Service Class and Storage Service Class
o Ethernet 10/100 Base T

Additional Values from Shimadzu
• Grid Cap 70C ; 130 cm, 6:1, 52lpc, AL spacer, Vertical Lines
CDXI-GCOM software

Transformer, ZS-200 CAB (step down from 480V to 200V)
Transformer, D150BVC-40S (step up from 200V to 400V)

Canon CXDI-401C Wireless Digital Detector

- 17"x17" cassette size, full imaging field, no edge un-sharpness/drop off
- Amorphous Silicon Sensor (a-SI)
- CsI (Cesium Iodide) scintillator
- 125 x 125 micron pixel pitch
- 3320 x 3408 pixels
- Image area 16.3 x 16.8 inches (43 x 42 cm)
- 12 bit / 4,096 or 16 bit / 65,536 gray scale selectable
- (16 bits A/D)
- ISO 4090 compliant cassette size detector
- Sensor size (W x L x T): 15:1" x 18.1" x 0.6"
- Sensor weight: 7.3 lb (3.8) kg
- Water Resistant to IPX4
  - Test Duration: 5 minutes
  - Water Volume 10 liters per minute
  - Pressure 80-100 kPa
- Preview image approx. 1-3 seconds
- Full Image display time approx. seconds
- Cycle time approx. 9 seconds
- FDA 510(k), FCC Class A, UL 2801-1, EN60601, CE0197
- Battery performance: 140 images (@100 sec. cycle, 1 sec. sleep)
- Standard Components: Sensor unit, power box, battery charger, 2 batteries
- Grid line suppression for 34, 40, 52, & 60 lpc grids
- Wiring battery charge mode

(Qty: 1)

Qty	Item #	Description	List Price	Disc. Price

Grid Cap with Single Handle; 130 cm, 8:1, 215 lpi, AL spacer 17 x 17

1

Grid Cap for scatter radiation reduction
 - Focus 130 cm
 - Ratio 8:1
 - 40 lpc Frequency
 - Aluminum Interspaced

1   **CXDI-701C Wireless Digital Detector**

The Canon CXDI-701C Wireless portable, lightweight DR system provides super high resolution, high quality, filmless image capture for a broad range of radiographic applications, including trauma, ICU and bedside exams. The CXDI-701C Wireless is an ISO 4090 compliant cassette size detector that can fit into existing bucky trays, or in new equipment trays with ease.

Offering high-quality diagnostic images efficiently with minimum X-ray exposure to patients the CXDI-701C Wireless is ideal for all radiographic use, especially pediatric. This portable DR system consists of a Canon Amorphous Silicon (a-Si) Flat Panel Detector and a Cesium Iodide (CsI) Scintillator, allowing for extremely effective X-ray absorption and high signal-to-noise performance. The large 14-inch x 17-inch imaging area and portable design - just over a half-inch thick (0.6 inches) and weighting only 7.3 lbs. - allow the CXDI-701C Wireless to be especially useful with patients who have limited mobility and for capturing images at angles that are difficult to set with fixed devices.

Immediate Results:
An on-screen preview image is available approximately 1-2 seconds after exposure. An additional monitor (not included) can be added for the immediate viewing of high-resolution images in the emergency department or radiography suite.

Includes:
1 - CXDI-701C Wireless imaging unit
1 - Operation manual
2 - Battery Packs

Features and Specifications:

Detector
 - Scintillator: Cesium Iodide
 - Pixel Pitch: 125 microns
 - Pixels: 2,800 x 3,408 (9.5 million)
 - Imaging Area: 14 inches x 17inches (35 cm x 43 cm)
 - Battery Performance: 140 images
 - Wireless Standard: IEEE 802.11N (5 & 2.4 GHz)

Image Acquisition
 - A/D: 16 bit
 - Grayscale: 12 bit or 16 bit selectable
 - Preview Image: 1-2 seconds

Electrical and Environmental
 - Voltage: 100V, 120V, 230/240V (50/60Hz)
 - Power Consumption: 170VA maximum (Detector unit only)
 - Operating Environment: 41-95°F (5-35°C), 30-80% RH (non-condensing)

Physical Characteristics
 - Dimensions (WxLxH): 15.1 inches x 18.1 inches x 0.6 inch (384 x 460 x 15 mm)
 - Weight: 7.3 lbs. (3.3 kg) with battery

1   **Grid Cap with Single Handle 130 cm, 6:1, 52 lpi, AL spacer , Vertical Lines 14x17**

1   **Wiring Units WU-3A (for 701C/801C/401CW)**

Qty	Description
1	Compact Local Console
1	Dual Flat Monitor type, 24" C'Balanced height with Swing arm for X-Y transverse rail.
1	4'0" Cable Carrier Kit
1	Monitor EXT-Box Assy
1	X-Y 6' 8" adapter for Shimadzu CH-200 with 1.1 meter fixed ra spacing
1	CH-200 (UL, Front Mount) CTM Pre-Installed package
1	R-300 (UL) Auto size sensing collimator, with auto filtering
1	0.6/1.2P324DK-85, 400kHU tube, 0.6 & 1.2mm spot, 12 degrees angle
1	GSC-2002L Radiographic Console
1	CH-G4 Connection Kit
1	SID Detection - Longitudinal Assembly
1	High tension cable pair - 30 meter
1	Accessory pack, 28RF
1	BR-120 (UL) Auto wall bucky stand with Removable Grid
1	Interlink Vertical Height Detection Assembly BR-120
1	Removable Grid; 52lpc 140 CM focus grid
1	FPD Kit Wireless for BR120/120T/120M
1	Wallstand Top Wall Brackets (BR-120/120T/120M)
1	SPT-XD-A3B, 3 pick-up AEC Photo Chambr, 30m cable
1	Installation of mount kit for Wall Bucky
1	Laser Line Marker Option (R-300)
1	Detent Assy for click stop (R-300)
1	Calculated Dosimeter option (R-300)
1	DICOM Radiation Dose Structure Report (RDSR)

Qty	Item #	Description

1   **Tomosynthesis Option**

Tomosynthesis is an automated acquisition process that acquires several images while the tube is moving in an arc, from 8-40 degrees, across a region of interest.

The series of images are then processed in a "Cone Beam" or CT-type back projector resulting in a volume of data. The volume of data is then available for investigation by scrolling through the volume in a series of slices.

Slice thickness can be post processed in a similar manor to that used in CT imaging. Slices of interest can be extracted as required for further investigation, printing and DICOM storage.

Tomosynthesis provides numerous key advantages including:
 - Low dose
 - Weight bearing
 - Low metal artifacts
 - High spatial resolution
 - High quality imaging in plaster fixation
 - Easy positioning
 - Fast acquisition
 - Large FOV
 - Erect and Supine AP/PA and Lateral Projections

1   **T-smart Option (Tomosynthesis - Shimadzu Metal Artifact Reduction Technology) Choose one set of Tomosynthesis together***

"T-smart" divides the original projection images into two projection image sets, metal-free projection images and metal-only projection images, by using advanced metal extraction algorithm. Then, it performs iterative reconstruction to each of them, and finally integrates the two data in one. Advanced orthopedic imaging solution to minimize the metal artifacts ideal for orthopedic implant patient cases.

1   **Slot Radiography**

1   **Supporting Band for Slot scanning**

1   **Grip bar for Slot scanning**

1   **Footrest for Slot scanning**

1   **Compression Band: Table (ZS-200/ZS100/BK200)**

1   **Mat Sensor IMU Assy (Safety sensor around G4 FPD) - Included**

1   **Lateral cassette holder used with Grid Cap (NEW ITEM)**

1   **Frontal Handgrip (BR-120/120T/120M)**

1   **Overhand Lateral Handgrip (BR-120/120T/120M)**

1   **Fixed rail 5.5m for CTM**

1   **Traveling Rail 3.3m for CTM**

1   **Kenex Height Adjustable Over Table X-Ray Shield**

Qty	Description
1	**TIMS 2000 SP Shimadzu W/ Cart (w/audio capture) (Include TDRS)**
1	**Shimadzu DVI Kit Cart**
1	**24" LCD Display with Speakers**
1	**Battery Pack (single) - extra**
1	**PurePower - Power Control and Distribution Unit**
1	**Inside Delivery (2 men - 6 hours Each) with crate removal an disposal**
1	**Installation Dollies Rental**
	SUBTOTAL VA CONTRACT PRICE (57% Base & 50% Options off list)
1	**Applications - 7 Days (4 days at initial, 3 days follow-up to include Advanced after 6 weeks) - INCLUDED**
1	**Freight FOB Building Site ($9,000 value)**
	FOB VA - Portland, OR or Vancouver, WA
1	**Wall Holder for CXDI-701 and CXDI801 Series Detector and Grid Cap. ($800 value)**
1	**14 x 17 inch or 35 x 43 cm CR Cassette and DR Panel Protect - 750lb Capacity ($770 value)**
1	**Architectural Room Drawings - Site specific. With full AutoC ($2,000 value)**
	including AutoCad and Isometric
1	**Service Training - Sonialvision G4 Service Training Class**
	- Tuition for one (1) biomedical engineer for 4-5 days service training clas at Shimadzu Medical Systems - Does not include Travel and Living expenses.
	GRAND TOTAL **Can not be shared with any other purchasing group**

Qty	Description

1   **The following items are not included in the total price listed above. If you wish to purchase these items, indicate "Accept" next to the item, followed by your initials. The amount for each option below will be added to the total above if accepted. These items may replace other items in the quotation above, and will be indicated per item.**

OPTIONAL SERVICE TRAINING - FEDERAL ITEMS:

1   **Service Training - Canon DR, CXDI NE Control Software & New Generation Sensors Service Training Class**
(Optional)

- Tuition for one (1) biomedical engineer for 4-5 days service training class at Shimadzu Medical Systems
- Does not include Travel and Living expenses.

1   **TERMS AND CONDITIONS:**

INSTALLATION INCLUDED.
MECHANICAL AND ELECTRICAL FACILITIES FURNISHED BY OWNER.

WARRANTY 1 YEAR PARTS AND LABOR.

DELIVERY 90 TO 160 DAYS ARO.

APPLICABLE TAX IS ADDITIONAL AND WILL BE INVOICE BASED UPON THE DELIVERY/INSTALLATION LOCATION. FREIGHT IS FOB DESTINATION FREIGHT INCLUDED.

0% DOWN, 80% ON DELIVERY AND BALANCE UPON COMPLETION OF INSTALLATION.

PLACEHOLDER ONLY PRICE VALID 30 DAYS.