

# Equipment Specifications

## Digital Portable Radiography

### V23-

## A. REQUIREMENT OVERVIEW

VISN 23 has a requirement for 22 replacement digital portable radiographic units. This equipment is required for radiographic imaging of Veterans who cannot be moved to the radiology department and who are in areas—such as intensive and critical care units or operating and emergency rooms. These devices will be used mainly for general adult two-dimensional (2-D) radiographic studies (predominantly for chest x-rays) as well as orthopedic imaging.

Facility	Quantity
Black Hills VA Healthcare System	3
Central Iowa VA Healthcare System	2
Fargo VA Healthcare System	3
Iowa City VA Healthcare System	4
Nebraska Western Iowa VA Healthcare System	5
Sioux Falls VA Healthcare System	3
St. Cloud VA Healthcare System	2

## B. TECHNICAL REQUIREMENTS

### 1. Unit physical specifications

a. High frequency generator power [kW]	30 kW
b. Generator kV range [kV]	35-125 kV
c. Tube maximum kVp [kVp]	125 kVp
d. Generator mAs range [mAs]	0.1 – 400 mAs or similar
e. Minimum computer hard drive [GB]	300 GB
f. Number of wireless detector	1
g. Number of batteries per detector	1
h. Minimum detector size [cm x cm]	35x43 cm (14x17 inches)
i. Minimum detector resolution [lp/mm]	3.2 lp/mm
j. Maximum wireless detector weight with battery installed [lbs]	7.0 lbs (14x17) 9.0 lbs (17x17)
k. Detector distributed weight limit [lbs]	150 kg (direct pressure 100kg)
l. Minimum detector field of view [cm x cm]	35x43 cm (14x17 inches)
m. X-ray tube focal spot range [mm]	0.6-1.2
n. Maximum charge time from no charge [hr]	5
o. Minimum collimator rotation [deg]	270 degrees from axis in both directions



p. Minimum display monitor size [in]	17
q. Minimum resolution of display monitor	1920/1080 (full HD)

## 2. Additional specifications

<input checked="" type="checkbox"/>	a. On-board image touch screen display
<input checked="" type="checkbox"/>	b. Integrated dose reporting with RDSR reports
<input checked="" type="checkbox"/>	c. Ability to fully expose a 14x17 field at 40 inches (even when collimator is rotated)
<input checked="" type="checkbox"/>	d. Multiple IP destinations for images to be sent
<input checked="" type="checkbox"/>	e. kV range in increments of approximately 1kV
<input checked="" type="checkbox"/>	f. Collapsible column
<input checked="" type="checkbox"/>	g. Ability to release and move tube from arm (free release handles)
<input checked="" type="checkbox"/>	h. LED positioning light
<input checked="" type="checkbox"/>	i. Algorithms to reprocess for tubes and lines
<input checked="" type="checkbox"/>	j. Manual movement of portable when batteries are depleted
<input checked="" type="checkbox"/>	k. Ability to move portable from tube head
<input checked="" type="checkbox"/>	l. Ability to charge detector battery on unit
<input checked="" type="checkbox"/>	m. Trickle charge method for detector battery
<input checked="" type="checkbox"/>	n. Backup tether for DR Detector
<input checked="" type="checkbox"/>	o. Battery charge level indicator (estimated time/exposure remaining)
<input checked="" type="checkbox"/>	p. Ability to make exposures on wall outlet connection
<input checked="" type="checkbox"/>	q. Standard wall outlet connection with retractable cord
<input checked="" type="checkbox"/>	r. On board computer (DR reconstruction and display)

## 3. Software Solutions

<input checked="" type="checkbox"/>	a. Rapid image display
<input checked="" type="checkbox"/>	b. Image annotation
<input checked="" type="checkbox"/>	c. Ability to apply multiple image processing algorithms both pre and post-acquisition to allow for soft tissue, bone enhancement and/or line processing.
<input checked="" type="checkbox"/>	d. Ability to apply standard image editing functions, such as but not limited to; rotate, flip, zoom, window, level, etc.
<input checked="" type="checkbox"/>	e. Dose Reduction- The system must have systems in place to facilitate regular protocol optimization and reduced radiation dose to the patient.
<input checked="" type="checkbox"/>	f. Repeat rate – ability to track repeat / retake data to include such items as technologist (required unique identifier), reason for repeat, patient dose, exam type, etc. The data should be exportable to Excel or other databases for tracking, trending, and combining with data from other imaging sources within the facility.

## 4. Security/Connectivity Requirements

<input checked="" type="checkbox"/>	a. OEM-supported operating system
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<input checked="" type="checkbox"/>	b. DICOM 3.0 print, store, commit, radiation dose structured report (RDSR), and modality worklist
<input checked="" type="checkbox"/>	c. HL7 integration (HIS/RIS)
<input checked="" type="checkbox"/>	d. Wireless connectivity to VA network – compatible with 802.11b/g/n and FIPS 140-2 compliant
<input checked="" type="checkbox"/>	e. Encrypted hard drive
<input checked="" type="checkbox"/>	f. PACS compatibility – Visage, Medicalis

## 5. Added Value

Specifications listed below are not required, but preferred. Vendors who do not include the below specifications in the submitted offer will not be docked or excluded from consideration. Specifications listed below will be evaluated based on added value.

<input checked="" type="checkbox"/>	a. Pre-programmed exposure settings
<input checked="" type="checkbox"/>	b. On-board user monitor with pop-up keyboard
<input checked="" type="checkbox"/>	c. Option for wireless and wired exposure control
<input checked="" type="checkbox"/>	d. Display monitor at tube head
<input checked="" type="checkbox"/>	e. Positioning handles on collimator, not on tube head
<input checked="" type="checkbox"/>	f. Grid and Gridless processing technology available
<input checked="" type="checkbox"/>	g. SID positioning aids (e.g. laser alignment)
<input checked="" type="checkbox"/>	h. Tube and detector angle alignment software
<input checked="" type="checkbox"/>	i. Handles on the boom arm to allow for rotation of the tube
<input checked="" type="checkbox"/>	j. Battery type – Lithium Ion
<input checked="" type="checkbox"/>	k. 17x17 detector instead of 14x17 not in addition to
<input checked="" type="checkbox"/>	l. Display DICOM SMPTE QC pattern on monitor
<input checked="" type="checkbox"/>	m. Lock feature on the drive unit of the portable system (i.e. must enter code or wave card to unlock)
<input checked="" type="checkbox"/>	n. Touchscreen on the tube unit

## C. TRAINING REQUIREMENTS

Description	No. of Personnel
1. On-site clinical applications training for technologists during go-live	Varies by site. Please see table below.
2. On-site follow-up clinical applications training once technologists have hands-on experience with the system	Varies by site. Please see table below.
3. On-site super user training during go-live	Varies by site. Please see table below.
4. Biomedical technician training package (to include tuition)	Varies by site. Please see table below.

Biomedical technician training shall include any prerequisites required prior to the training and shall be equivalent to the training received by OEM field service representatives. Technicians shall be given all service manuals,



schematics, diagrams, diagnostic software, other special tools, and keys equivalent to what OEM field service representatives have available to diagnose, troubleshoot, repair, and maintain the equipment.

Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).

Off-site training will not be purchased at the time of award. Vendors must demonstrate that they can provide any required off-site training listed above, therefore off-site training should be quoted as an optional item. Travel for VA employees is not authorized under the HTME contracts. In no case should any training include expenses for travel or travel for VA personnel at no cost.

## **D. SERVICE REQUIREMENTS**

1. VPN/Remote Access – The vendor shall provide, at no additional cost, any and all equipment service programs, such as remote diagnostics, during the warranty period. The vendor shall provide post-warranty remote diagnostic service program as an “Add Option” with the offer. The system shall provide vendor remote diagnostics via VPN. The vendor shall either utilize the VA national site-to-site VPN or work with the Office of Cyber and Information Security and the VAMC Information Systems Security Officer to establish a client-based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed systems:
  - a. Two (2) copies of operator instruction manuals (one (1) electronic and one (1) physical copy)
  - b. Two (2) copies of a system manager (super user) manual outlining back-up procedures, managing privilege group limits, routine tasks, etc.
3. Minimum Warranty – The system and accessories shall be covered under the manufacturer’s warranty and shall include all parts and labor for one year following acceptance by the VAMC. This warranty must include PMS as required by the manufacturer. The manufacturer’s factory-trained field service representatives shall perform installation and maintenance during the warranty period.

Vendors are encouraged to include any offerings for service, warranty, and training that may exceed the requirements with their proposals. Vendors who do not include any added value offerings for service, warranty, and training will not be docked or excluded from consideration. However, any such offerings will be evaluated based on added value.

## **E. OTHER INFORMATION/DOCUMENTATION REQUESTED**

1. Product brochures
2. Technical specification sheets to include; length, width, and weight of portable unit
3. Provide options/solutions for manual movement of portable when batteries are depleted
4. Provide maintenance requirements and drop policy (post warranty)
5. Provide distributed weight limit of detector
6. Provide drive battery type
7. Provide maximum direct weight limit of detector
8. DICOM Conformance Statement
9. IHE integration statement
10. FIPS 140-2 certification for wireless connectivity to VA network
11. Completed pre-procurement assessment form (6550)
12. Version/platform long-term plan



13. Detailed information about the curriculum and length of the biomedical technical training
14. Details on any off-site training offered for technologists
15. Information about your company's support structure during the warranty period
  - a. Describe on-line or telephonic applications support and availability (include third party coverage)
  - b. Provide a listing of field service engineer locations and availability
  - c. Provide a listing of part depots
16. Information about your company's support options following the warranty period, including a description of on-line or telephonic applications support and availability
17. Two (2) copies of the product service manual (1 hard copy and 1 digital copy)

## F. TRADE-IN

<input checked="" type="checkbox"/>	a. In instances where sanitization of ePHI compromises the OS and/or application software, or requires the removal of internal storage media, the vendor accepts the equipment "as is" and can elect at their own discretion to contract with the original equipment manufacturer (OEM) to restore the system.
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The following equipment is available for trade-in. Please reflect any credits provided for trade-in equipment in the proposal.

Station:	Fort Meade (568)
Manufacturer:	GE
Model:	Optima XR220
EE/Asset Number:	220397
Serial Number:	1035367WK0

Station	Fort Meade (568)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	220403
Serial Number	1035321WK7

Station	Hot Springs (568A4)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	220407
Serial Number	1035368WK8

Station	Des Moines (636A6)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	368916
Serial Number	1035598WK0

Station	Des Moines (636A6)
Manufacturer	GE



Model	Optima XR220
EE/Asset Number	368921
Serial Number	1035320WK9

Station	Fargo (437)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	242170
Serial Number	1035062WK7

Station	Fargo (437)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	242180
Serial Number	1034965WK2

Station	Fargo (437)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	242175
Serial Number	1035061WK9

Station	Iowa City (636A8)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	158188
Serial Number	1035737WK4

Station	Iowa City (636A8)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	158197
Serial Number	1035743WK2

Station	Iowa City (636A8)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	158209
Serial Number	1035728WK3

Station	Iowa City (636A8)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	158215
Serial Number	1035742WK4

Station	Omaha (636)
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Manufacturer	GE
Model	Optima XR220
EE/Asset Number	368827
Serial Number	1035369WK6

Station	Omaha (636)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	368853
Serial Number	1035374WK6

Station	Omaha (636)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	368858
Serial Number	1035370WK4

Station	Omaha (636)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	367514
Serial Number	1035371WK2

Station	Grand Island (636A4)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	368842
Serial Number	1035373WK8

Station	Sioux Falls (438)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	339162
Serial Number	1035322WK5

Station	Sioux Falls (438)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	339187
Serial Number	1035285WK4

Station	Sioux Falls (438)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	339192
Serial Number	1035284WK7





Station	St. Cloud (656)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	321532
Serial Number	1035372WK0

Station	St. Cloud (656)
Manufacturer	GE
Model	Optima XR220
EE/Asset Number	321538
Serial Number	1035283WK9

## G. SUMMARY OF REQUIREMENTS

This section outlines differences in requirements based on the unique needs of each facility. Vendors are encouraged to use the table below when developing proposals to best meet the requirements of each facility.

Facility	PO Number	C.1-2 Technologists for Clinical Apps (go- live/follow-up)	C.3 Technologists for Super User Training	C.4 Biomedical Technical Training
Fort Meade (568)	618-B89026	7	1	1
Fort Meade (568)	618-B89027	0	0	0
Hot Springs (568A4)	618-B89028	3	1	1
Des Moines (636)	618-B89029	9	2	1
Des Moines (636)	618-B89030	0	0	0
Fargo (437)	618-B89031	10	2	1
Fargo (437)	618-B89032	0	0	0
Fargo (437)	618-B89033	0	0	0
Iowa City (636A8)	618-B89034	12	1	1
Iowa City (636A8)	618-B89035	0	0	1
Iowa City (636A8)	618-B89036	0	0	0
Iowa City (636A8)	618-B89037	0	0	0
Omaha (636)	618-B89038	20	2	1
Omaha (636)	618-B89039	0	0	1
Omaha (636)	618-B89040	0	0	0
Omaha (636)	618-B89042	0	0	0
Grand Island (636A4)	618-B89043	3	1	1
Sioux Falls (438)	618-B89044	17	2	1
Sioux Falls (438)	618-B89045	0	0	1
Sioux Falls (438)	618-B89046	0	0	0
St. Cloud (656)	618-B89047	10	2	1
St. Cloud (656)	618-B89048	0	0	1

