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Optima XR220amx

Optima XR220amx Digital Mobile Radiographic system

The Optima XR220amx is a self-contained battery operated mobile radiographic digital X-Ray imaging system designed for performing radiographic exams at the point of care

Key Features

- 15 KW generator
- Wireless Digital Flashpad Detector with 6:1 removable grid, Back-up tether, QAP (Quality Assurance Procedure)
- Dose Area Product Meter (DAP)
- Capable of 100-240V nominal, 50/60Hz operation
- Stand-by mode to eliminate boot up cycles and allow exposure within 25 seconds. Exposures can be taken and processed while the unit is charging
- Detector battery charges automatically while the detector is in the bin
- Optimized GUI - Technique, image acquisition and display tools in a single integrated user interface
- The detector can be used in additional wireless enabled GE radiographic systems: please refer to the current literature for system compatibility

Productivity

- Up to 1,200 w of power available to minimize charge time
- System can be driven within 4 seconds of activation
- Pre-programmed techniques per anatomy and patient size
- Systems can be used without the detector
- Modality Perform Procedure Step (MPPS; SPS/PPS configurable)
- Automated and customizable image transfer to PACS and printers
- Can reprocess images post acquisition and during an exam
- Usage reporting tools by individuals and user groups
- System Health dashboard for system status
- Bin stores detector and grid
- Built in storage for cleaning wipes, gloves and lead apron
- Self-propelled single drive handle control with variable speed of up to 5km/h (3.1mph on flat surfaces) forward and reverse to automatically adjust to the operator's pace

Wireless Digital Detector Specifications

- Detector battery can take up to 45 exposures per hour and provide enough power for 3 hours of use on a single charge

- Single-panel (non-tiled) amorphous silicon detector with a Cesium Iodide scintillator
- Image area 40.4cm x 40.4cm (15.9in x 15.9in)
- Active matrix 2022 x 2022 pixels
- 8mb raw image file size
- Pixel Pitch 200 microns
- Typical upper dynamic range 7.8mR
- Typical DQE @ 0lp/mm: 68%
- 2 handgrips
- Dimensions: L-23.1in x H-17.8in, T-0.94in (L-580mm, H-452mm, T-24mm)
- Wireless point-to-point network between the system and detector for transferring image data
 - Communication over wide 500MHz channels to achieve very high data rates
 - Designed to co-exist with 802.11 networks without interference
 - Frequency: 3.1-10.6 GHz
 - Max Power Output: -41.3 dBm
 - Max PHY Data rate: 480 Mbps
 - Effective Throughput: 30-70 Mbps

Worklist can be retrieved from HIS/RIS systems and images can be transmitted through the DICOM interface to printers, archival devices (PACS), servers or review workstations.

- RJ45 10/100/1000 Base T Ethernet port

Please refer to DICOM conformance statement for complete definition of supported DICOM services.

Generator

- 300 mA max
- kVp and mAs controls
- Less than 2% low frequency ripple
- Frequency: greater than 100 kHz; Super resonant inverter with varying frequency

X-ray Source

- Nominal Tube Voltage (Radiographic) ~ 150kV
- Nominal Focal Spot size (IEC 60336):
 - Large Focus: 1.3mm
 - Small Focus: 0.6mm
- Anode Rotation Speed (minimal): 3200 min
- Permanent Filtration: 0.9mm Al/75 kV IEC60522: 1999

- Maximum X-ray Tube Current
 - Large Focus: 500 mA
 - Small Focus: 200 mA Maximum Continuous Heat Dissipation: Without Air-circulator: 170W (238 HU/s)

Collimator A pair of independent collimator blades controls the X-ray field

- 180 lux (1000 Lumen/mt2) light field lamp
- The collimator rotates ± 180 degrees with detents at -180, -90, 0, +90 & +180 degrees
- Full 43cm x 43cm (17in) coverage at a 100cm SID
- The column may be rotated up to ± 270 degrees from the part position
- Drive inhibit keypad access
- Password protected access to patient information for compliance with confidentiality regulations
- Automatic safety brake: Operator must hold drive handles to allow system movement
- Integrated front bumper stops unit and activates brakes when activated

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Wireless Connectivity for Optima XR220amx and Optima XR200amx
802.11 a/b/g n-compatible wireless connectivity to hospital network

Wi-Fi Certified

Compatible with:

- 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA 802.1X
- AES - TKIP
- 64-, 128-WEP
- VPN: IPSec - IKE
- Management Frame Protection (MFP) EAP Types:
 - LEAP
 - LEAP + 128-WEP
 - LEAP + WPA
 - EAP - TLS
 - EAP-TTLS/MSCHAPv2
 - EAP-FAST
 - PEAP-GTC
 - PEAP/MSCHAPv2

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Auto Protocol Assist for Optima XR200amx and Optima XR220amx

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Repeat/Reject Analysis for Optima XR220amx/Upgraded Optima XR200amx

- 1 E7009HB Sterile Protective Drapes - Detector Drape
- 1 W0112RA Optima XR220amx Training: 4 Days Onsite (3 Days + 1 Day)
One 3 day and one 1 day TIP onsite training visit for Optima XR220amx.
Includes T&L expenses. Days provided in two customer visits.
This training program must be scheduled and completed within 12 months after the date of product delivery.
- 2 R0103RY X-ray AMX-4 Service (Class/Lab)
Course covers Operation, Maintenance and Troubleshooting of the AMX 4 & AMX 4+ systems.
This course must be taken within 2 years from the purchase date.
- 2 R0165RY Definium AMX 700 Service Training (Class/Lab)
Location of Training: GEHI
Length in hours and days: 16 hours; 2 days
Start Time: 8:00 am Start Day: Monday End Time: 5:00 pm End Day: Tuesday
Minimum Class Size: 1 Maximum Class Size: 6
Executive Summary: Service training course for the digital portable AMX 4, Definium AMX 700. It is a differences course and only includes the digital part of the system.
Course Competencies:
The following are the high-level course competencies:
 - Identify the digital hardware components.
 - Recognize how to operate the system in the application mode.
 - Identify troubleshooting techniques and tools
 - Perform the basic configuration and calibration procedures and how they are performed.
Prerequisites: AMX 4 Digital Rad Systems This course must be taken within 2 years from the purchase date.
- 28 R0100CM Meals and Lodging Expense has been developed to allow the customer the convenience of prepaying for their meals and lodging expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI.
The price of this convenience is based on a per day basis. Thus a quantity of 1 is equal to 1 day's meals and lodging expense. When purchasing the meals and lodging expense please be mindful of weekend days during the training stay and include 2 days to cover a weekend in the purchase quantity.

Examples: A 5-day course needs a quantity of 5. Any course longer than 5 days should include 2 days to account for the weekend stay. Any course longer than 10 days will require an additional 4 days of the meals and lodging expense to cover the 2 weekends of the stay. Thus a 15-day course would have a quantity of 19 days to cover the 2 weekends of the stay. This expense must be used within 2 years from the purchase date.

Three meals a day Monday thru Thursday, 2 meals on Friday, plus breaks are provided in the onsite cafeteria. The GE Healthcare Institute cafeteria closes Friday after lunch and reopens Monday morning for breakfast. Weekend meals are the responsibility of the customer.

Only for In-resident courses to be taken at the GE Healthcare Institute.

4 R0101CM

The AIRFARE EXPENSE has been developed to allow the customer the convenience to prepay their roundtrip Airfare expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI. To be used for engineers attending In-Resident Class/Lab courses for Diagnostic Imaging.

Customer will make their Airfare arrangements thru the GE Travel Center. Specific directions will be provided to the customer upon confirmation of class. Please note that this expense must be used within 2 years of the purchase date.

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Lodging Weekend Expense

Weekend Lodging Expense is to cover Saturday and Sunday lodging expenses for those engineers who are staying at the Rivers Edge Condos while attending Diagnostic Imaging Biomed training at the Healthcare Institute. Please note that there are no meals included on the weekend. Must be used within 2 years from the purchase date.

2 R0181RY

X-RAY BASIC SERVICE (WEB)

This course is a prerequisite to R0182RY and is included in the purchase of the In-residence course. This course consists of 2 sections: Prerequisite and Reference course material. Prerequisite course material includes: Radiographic basic applications and Fluoroscopic basic applications. Reference course materials include: X-ray principles, Radiographic components, Fluoroscopic components. Studying the prerequisite course material and passing the 2 tests is required before attending R0182RY X-RAY BASIC SERVICE in-resident course. This course must be taken within 2 years from the purchase date.

2 R0182RY

X-RAY BASIC SERVICE (CLASS/LAB) (9 Days)

The X-RAY BASIC SERVICE in-resident course will equip the engineer with the theory and physics of x-ray and the ability to operate and identify x-ray systems at a basic service level. The in-residence course will provide classroom instruction as well as hands-on lab training on a variety of R&F systems. The purchase of this course doesn't include the online course R0181RY which must be complete before attending this course. This course must be taken within 2 years