AMX™ 240*
AMX 240 HD Upgrade
Mobile Digital Radiographic System

gehealthcare.com

* The AMX 240 is a commercial configuration of the Optima XR240amx.

System Application

AMX 240 is a self-contained; battery operated mobile radiographic imaging system designed to generate diagnostic radiographic images (medical x-rays) that may increase the ability to detect disease or injury early enough for a medical problem to be managed, treated, or cured.

The AMX 240 system is indicated for use on adult and pediatric patients for general-purpose diagnostic radiographic examinations and procedures. Its mobility enables general-purpose radiographic procedures throughout the clinical environment, or as needed within the emergency, intensive care, premature birth ward, cardiac and operating departments, for patients that may not be able to be moved or in cases where it is unsafe or impractical to move them to a traditional RAD room. The incorporation of digital flat panel detectors provides increased functionality to enable images of patients of all sizes.

Key Features

- Helix™ – Advanced Image Processing
- QuickCharge – FlashPad HD battery charges automatically while the detector is in the bin when the system is on, or in standby
- QuickShare – FlashPad HD detectors can be shared across compatible systems within the healthcare facility by all users
- QuickConnect – 802.11n 5GHz link between the system and detector supports automatic channel switching to improve image transfer avoiding wireless interference with hospital network
- QuickEnhance – Simple 1-touch image reprocessing to support line and tube placement verification (optional)
- AutoGrid – Software that can be used in lieu of a physical anti-scatter grid to improve image contrast in general radiographic images by reducing the effects of scatter radiation (optional)
- HIS/RIS link – Provides on-screen HIS/RIS access to remote start, close, and complete exams (optional)
- RFID badge reader – Badge swipe system access (optional)
- Secondary monitor – Column mounted touchscreen display which allows other operators or users in the vicinity to view and interact with the system (optional)
- Remote service – Insite™ remote connectivity, OnWatch proactive monitoring, and iCenter™ asset management (optional)
- “Stand-by” mode – Eliminates boot up cycles and allows start of imaging exam within 20 seconds from “stand-by” mode
- Optimized Graphical User Interface – Technique, image acquisition and display tools in a single integrated user interface
- 30kW (nominal) generator
- Common tools available in all image processing screens
- DAP meter included
- QAP (Quality Assurance Procedure)
- Can be used with GE Healthcare Giraffe* OmniBed Carestation incubator and radiant warmer
- Automatic charging algorithms allow the system to be recharged at any charge level, even during exposures
- Dose Reports can be downloaded from the system
- Radiation Dose Structured Reporting (optional)
- Removable snap-on grids (6:1 and 8:1 optional)
- Removable, rechargeable battery and charger (optional)
- Detector tether (optional)

Productivity

- 4.5 hours to go from 0% to 100% for system battery charge
- System can be driven within 4 seconds of activation
- Pre-programmed techniques per anatomy, view, and patient size
- Image text annotations are supported with configurable font size for display and print
- Copy existing exams allows image reprocessing capability without additional exposures
- Reprocessing of images allow multiple “looks” selection with configurable display parameters during an exam or post exam closure
- Worklist entries remain visible on the user interface as part of the scheduled procedure step browser
- Automated and customizable image transfer to PACS and printers
- Worklist auto-refresh (configurable)
- Bin stores and charges detector(s) with grid(s) attached or detached
- Built in storage for cleaning wipes, gloves, and lead apron
- Designed for use with films or CR Cassettes
- Compatible with multiple cleaning agents (Refer to Operator Manual for details)
- Auto Protocol Assist – Matches procedure codes from Worklist to select anatomy technique (optional)
- Repeat/Reject Analysis – Allows classification and analysis of repeated/rejected exposures on the system (optional)

Wireless Digital Detector

- Single panel (non-tiled) amorphous silicon detector with a directly deposited cesium iodide scintillator
- Pixel pitch 100 microns
- Typical DQE @ 0lp/mm: 75%
- FlashPad HD 2530 (10" x 12")
  - Image area: 248 mm x 298 mm (9.8 in x 11.7 in)
  - Pixel matrix: 2508 x 3004 pixels
  - Weight: 1.8 kg (4 lbs.)
- FlashPad HD 3543 (14"x17")
  - Image area: 350 mm x 426 mm (13.8 in x 16.6 in)
  - Pixel matrix: 3524 x 4288 pixels
  - Weight: 3.2 kg (7 lbs.)
- FlashPad™ HD detectors can support up to 150 Kg (330 lbs.) of distributed load for bariatric applications

Detector Environmental Conditions	
Temperature	10°C to 35°C Operating
Humidity	20% to 80% RH. noncondensing

Cybersecurity Options

- Hard drive encryption
- Anti-Virus
- DICOM® TLS
- Audit logs

Networking

- Worklist can be retrieved from HIS/RIS system
- Images can be automatically transmitted through the DICOM interface to printers, archival devices (PACS), servers or review workstations
- RJ45 10/100 Base T Ethernet port and optional 802.11 wireless connection
- IHE and DICOM 3.0 compliant services:
  - DICOM DX Image generated
  - Support image transfer in DX or CR (multiple destinations) DICOM storage – Service Class User (SCU)
  - DICOM storage commitment - SCU
  - DICOM modality Worklist for HIS/RIS, SCU (with programmable auto refresh)
  - DICOM gray scale print – Manual and auto
  - Multi-format printing
  - DICOM CD-R media exchange (DX only)
  - Verification of connectivity for SCU and SCP services
  - DICOM Modality Performed Procedure Step (MPPS) feedback to the HIS/RIS (SPS PPS) (configurable)
  - VOI LUT burn on send (configurable)

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

Automated Image Display, Processing, and Annotation Functions

- Images can be previewed in 3 seconds
- Total processing time of less than 15 seconds
- Integrated 15 in (38.1 cm) touch-screen user interface Monitor matrix size 1024 x 768 pixels
- Patient orientation feature to match detector position image display and DICOM header
- Multiple sets of predefined and customizable image processing parameters for each anatomy, view, and patient size combination: Image processing looks
- Multi-resolution processing for image enhancement
- Advanced Noise Reduction (ANR) that reduces image noise while preserving detail
- EMI reduction algorithm to reduce potential artifacts generated from environmental electromagnetic interference
- Tissue Equalization (TE) algorithm that provides dynamic range control to enhance contrast in areas with varying densities
- Smart Windowing algorithm for automatic adjustment of brightness/contrast
- Intelligent Collimation Edge Detection (ICED) algorithm that locates collimation edges present in an X-ray image based solely on image information for automatic shuttering
- Digital L/R markers and image annotation
- Image rotation, zoom, manual shuttering, invert, and gray scale adjustment available
- Storage for more than 5100 uncompressed images
- Images can be exported to CD/DVD media for storage
- USB ports for external drive, barcode reader, and service keyboard

Drive

- Battery operated
- Self-propelled single handle drive control variable speed automatically adjusts to the operator's pace. Nominal speeds of 5 km/h (3.1 mph) forward on flat surfaces
- Speed is reduced in reverse or when the tube is not parked
- Capable of climbing an incline of 7°

Generator

- 300 mA max
- kVp and mAs controls

	Ratings	Steps
kVp	50 - 125	±1 kVp increments
mAs	0.2 - 630	1 Renard (25% up - 20% down)

- Super-resonant inverter with varying frequency
- Less than 2% low frequency ripple
- Frequency: greater than 100 kHz

X-ray Source

- Nominal tube voltage (Radiographic) 40 ~ 150 kV
- Nominal focal spot size (IEC 60336):
  - Large focus: 1.2 mm
  - Small focus: 0.6 mm
- Anode rotation speed (minimal): 3200 per min
- Permanent filtration: 0.9 mm Al/75 kV
- Maximum X-ray tube current:
  - Large focus: 500 mA
  - Small focus: 200 mA
- Maximum continuous heat dissipation without air-circulator: 170 W (238 HU/s)
- Maximum anode heat units 140 kHU
- Exposure time: 4.0 msec – 6.0 sec

Tube Positioning

- The column may be rotated up to ± 270° from the park position
- Tube angle display and SID measuring tool
- Focal spot range from 62.48 cm (24.6 in) to 200 cm (78.7 in)

Collimator

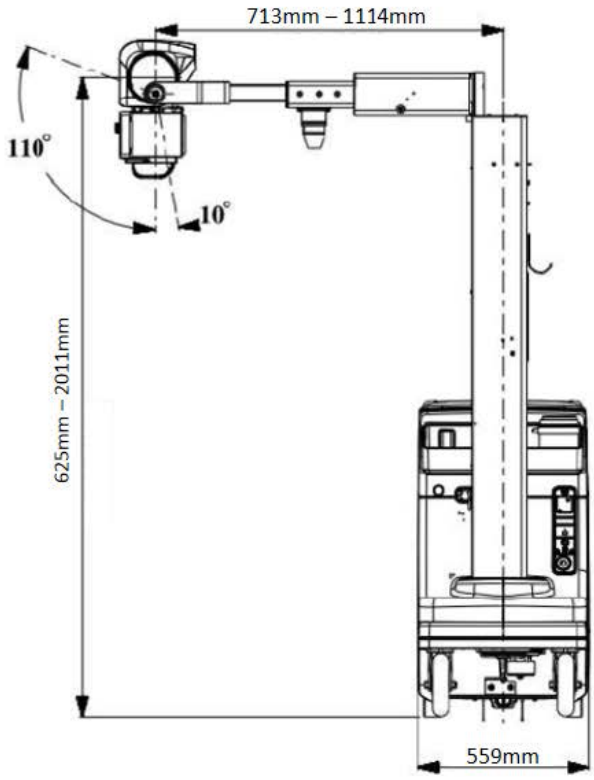
- A pair of independent collimator blades controls the field of view
- 160 lux light field lamp
- 43 cm x 43 cm (17 in x 17 in) coverage at 100 cm (40 in) SID
- The collimator rotates ±90 degrees with detents at -90, 0, and +90 degrees

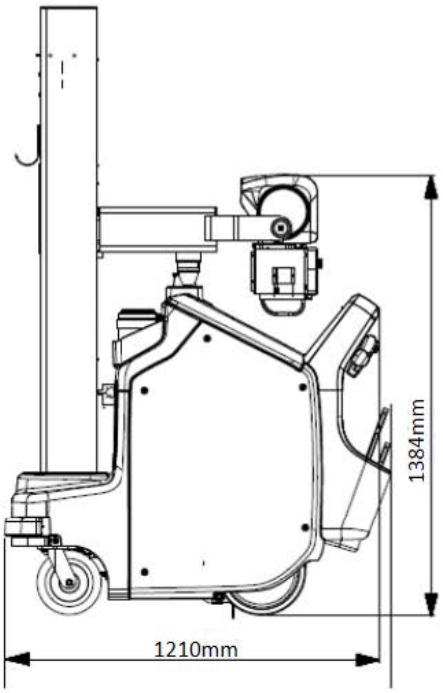
Power

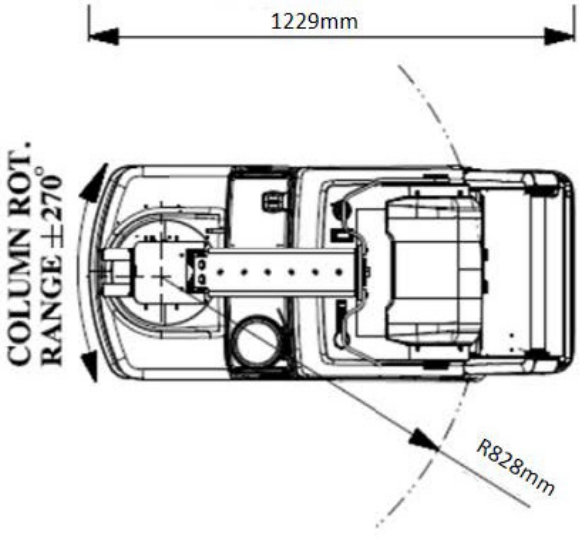
- Capable of 100-240 V nominal, 50/60 Hz operation
- System battery status display
- Battery operated system can perform up to 50 exams (100 X-ray exposures over approximately 6 hours) without being plugged into a power outlet (Refer to Operator Manual for details)

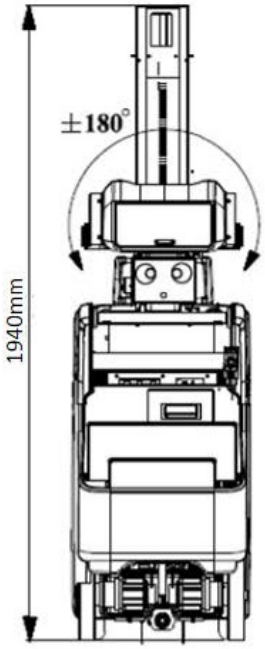
System Weight

- Weight is 445 kg (980 lbs.) max









Environmental and Safety Features

- Drive Inhibit keypad access
- Password protected to access patient information and to allow exposures
- Automatic safety brake requiring operator to hold drive controls that allows system movement
- Integrated front bumper activates brakes to stop the unit preventing forward drive until the bumper is released
- Bin storage for accessories such as bags or standard sized film/CR cassettes
- Smooth surfaces for cleanability

Compliance to Standards

AMX 240 Mobile Radiographic Imaging System is designed to meet applicable performance standards for diagnostic X-ray equipment enunciated by the U.S. Department of Health and Human Services pursuant to the Radiation Control for Health and Safety Act in addition, the system complies with AAMI, IEC and CSA requirements.

Warranty

The published company warranty in effect on date of shipment shall apply. Right reserved to make changes

* The AMX 240 is a commercial configuration of the Optima XR240amx.

March 2020
JB76966XX