

XR-PORT X-RAY, VAMC BIG SPRING, TX

PO# 519-B49001

Qty	Item Description
1	<b>Mobilett Mira</b> Universally applicable, high-performance and mobile digital radiographic unit for digital acquisitions with a flat detector; for use in intensive care units, premature children's and accident wards, in the operating theatre, and X-ray department. Includes a mobile radiography system (35 kW, 450 mA) with integrated imaging system including a charging cradle for a wireless flat detector. The system is ready for joint use of a single detector (wi-D sharing) with Ysio, Luminos dRF, Luminos Agile and/or Mobilett Mira; comply with the respective software requirements.
1	<b>FIPS 140-2 certified SW</b> FIPS 140-2 certified detector communication software.
1	<b>Clip-on grid 5/85 F115 for wi-D</b> Grid with clips for attaching to the portable wireless detector, including a new side cover for the transport holder.
1	<b>Mobilett Mira English keyboard</b> US keyboard
1	<b>Integrated dose area product</b> Integrated dose area product measuring system for Mobilett Mira consisting of: Dose measurement chamber (resolution: 0.01 $\mu\text{Gym}^2$ ) and digital display. Automatic transfer of the measured dose value to the imaging system. Part of the DICOM header when the image information is transferred to the PACS.
1	<b>External WLAN connectivity</b> WLAN antenna for wireless selection of a worklist from an RIS (radiology information system) and wireless transfer of DICOM image data to a PACS (picture archiving and communication system). The external WLAN antenna is attached to the cantilever arm of the Mobilett Mira to increase signal strength. The external WLAN antenna supports the WLAN standards IEEE 802.11b (11 Mbps) IEEE 802.11g (54 Mbps), and IEEE 802.11n (300 Mbps, for 2.4 GHz only). Supported authentication procedures: WPA Enterprise/Personal or WPA2 Personal. Supported encryption procedures: WPA-none, WEP, CKIP, TKIP, and AES_CCMP.
1	<b>Security Package / HIPAA</b> The SW option/extension enables enhanced security features including user management and audit trail functionality to support the HIPAA "Security" regulation.

Qty	Item Description
1	<b>Initial onsite trng 24 hrs</b> Up to (24) hours of on-site clinical education training, scheduled consecutively during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	<b>Addit Set Accompanying Documents</b>
1	<b>Additional Set of operator manuals</b>

One complimentary biomedical tuition is included with the purchase of this system. This training must be completed before the end of the warranty period.

Offset Part 14404888 Additional Set of operator manuals

Offset Part 14404887 Addit Set Accompanying Documents

Qty	Part No.	Item Description
1	14428734	<b>Extended Battery Pack</b> Alternative set of batteries with 40% greater capacity of 65 Ah, for more acquisitions in battery mode and enhanced mobility.

# Detailed Technical Specifications

## Mobilett Mira

### Description

The system is used as a universal, portable, digital radiography system for all skeletal acquisitions on recumbent and sitting patients. Application areas include trauma, routine and emergency diagnostics, thoracic diagnostics, and all types of bedside acquisitions.

#### X-ray system, basic unit

- Compact design
- Microprocessor-controlled high-frequency generator with single tank tube unit, multipulse voltage waveform
- High generator output with hybrid power technology  
35 kW at 96 kV 10 ms, 30 kW at 102 kV 100 ms according to IEC 601-2-7/1987
- Maximum tube current: 450 mA
- kV range 40 kV to 133 kV in 24 or 47 steps
- mAs range 0.32 to 360 mAs:  
0.32 – 360 mAs at 40-65 kV,  
0.32 – 320 mAs at 66-73 kV,  
0.32 – 280 mAs at 75-83 kV,  
0.32 – 250 mAs at 85-93 kV,  
0.32 – 220 mAs at 96-105 kV,  
0.32 – 200 mAs at 109-117 kV,  
0.32 – 180 mAs at 121-129 kV,  
0.32 – 160 mAs at 133 kV.
- During emergency operation via external power supply in case of run-down or defective batteries (line power mode), reduced mAs range of 0.32 – 125 mAs:  
mAs 0.32 – 125 at 40-52 kV,  
mAs 0.32 – 110 at 55-60 kV,  
mAs 0.32 – 100 at 63-66 kV,  
mAs 0.32 – 90 at 70-73 kV,  
mAs 0.32 – 80 at 77-81 kV,  
mAs 0.32 – 71 at 85-90 kV,  
mAs 0.32 – 63 at 96-102 kV,  
mAs 0.32 – 56 at 109-117 kV,  
mAs 0.32 – 50 at 125-133 kV.
- Shortest exposure time: 1 ms
- Maximum exposure time in digital mode: 3.2 sec.
- Free setting of the kV and mAs values via sensor touch control.
- Remote control of the light localizer lamp from the control panel
- Counterbalanced tube support arm
- Connection to any wall outlet with protective ground conductor
- 4 m long, automatically retracting power cable
- Footprint dimensions: 113 x 59.5 x 157 cm (L x W x H).
- Weight 390 kg
- Motorized drive operated via the drive control handle
- Forward, reverse drive with deadman switch
- Maximum incline 7 degrees
- Speed adjustable from 0.5 - 1.35 m/s

## Description

- Reduced speed (creep mode) with extended tube support, connected power cable, as well as when operating the tube support arm (micro inch mover).

Items included in the Shipment:

- High-voltage generator with built-in P135/30 R rotating anode tube, 9000 rpm, nominal focal spot size 0.8 (IEC 336/1982).
- Manual multileaf collimator with light localizer integrated in the tube assembly housing (LED, at least 180 lux with an SID of 1 m).
- Battery charging system with maintenance-free lead batteries

### Imaging and control station

The communication of the radiography system including digital image processing takes place from a central integrated imaging and control station.

This includes:

- A high-end PC imaging system, based on Windows XP with *syngo* user interface  
Storage of original data 14 bit.  
Storage of image data 12 bit.  
Storage capacity approx. 3000 images.
- A 17" color flat display as the control display, with touch screen operation
- CD/DVD drive for automatic, digital image storage on CD-R/DVD for offline data exchange in DICOM format.
- Manual button for exposure release.  
Option: Optical remote control (IR)
- Network connection via LAN
- Option: Network connection via WLAN in conjunction with an optional integrated wireless LAN antenna.

### Functions of the imaging and control station

Patient and study administration:

- Importing of patient lists and examinations from the HIS/RIS.
- Manual patient registration.
- Patient, study and image data management.
- Configuration functions.

Acquisition and postprocessing:

- Organ program selection and configuration.
- Selection of generator and organ program parameters.  
Parameterization of image preprocessing: enhancement, harmonization, edge enhancement and look-up tables (LUT).
- Display of current acquisition in 5 s max. (preview); complete image 10 s maximum.
- Display of image markers (L/R, a.p./p.a.)
- DiamondView Plus: multi-scaling procedure for image post-processing with high detail contrast and reduced noise.

DiamondView is a multi-scale procedure, i.e. filter size and strength are weighted differently and are used for adaptation to the overall image content.

- DiamondView expands the utilization of the dynamic range signal and enhances the organ-specific detail contrast (soft tissue and bones).
- DiamondView can be selected via the "Pre-processing card".
- By entering "0", the image can be displayed without DiamondView.

Image processing functions:

- Image rotation.
- Image mirroring horizontal / vertical
- Image zoom.
- Pan.

## Description

- Windowing.
- Filters for edge enhancement and noise reduction.

Image documentation and archiving:

- Image transfer into the network.
- Automatic, user-configurable data distribution (DICOM Send, see also DICOM system interfaces).
- Automatic filming with virtual film sheet (DICOM Print, see also DICOM system interfaces).
- Image data export (12 bit) to CD/DVD.

### Workflow

- Prior to exposure the patient data are transferred via the patient management system or entered via the control console. The exposure parameters are selected through the organ programs.
- Then the patient or the acquisition system is positioned and exposure is released
- The exposure released at the central system control is read out within a few seconds by the detector. The acquisition is displayed at the control display for orientation and made available in DICOM format at the imaging system output for sending e.g. to reporting workstations, image networks, laser cameras, etc.
- Clinical Assurance Program (CAP): Collection of deleted images, studies and patient data, including evaluation capabilities.

Password protection:

System access protected by password.

Option:

Security Package: SW option with enhanced security features such as User Management and Audit Trail function (if offered, see text of the corresponding components).

### DICOM system interfaces

- DICOM Send: Sending of images into the DICOM network.  
The DICOM Send function enables fully automatic transfer of generated image data to a DICOM archive or a DICOM workstation. The user can perform his examinations without interruption while the system fully automatically transfers the images to the archive. This image data transfer takes place entirely in the background and thus does not affect acquisitions performed at the same time.
- DICOM Modality Worklist/MPPS: Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist). Notification of examination status as well as sending of dose data, patient data, and examination data to an external RIS/HIS patient management system with DICOM MPPS (Modality Performed Procedure Step).
- DICOM Storage Commitment (StC): Feedback from the image archive.  
The DICOM StC function automatically gives feedback on whether the generated image data were successfully transferred. This way the user can be sure that the acquisitions stored locally in the imaging system can be deleted.
- DICOM Print: Printing of images by means of a virtual filmsheet on a DICOM laser camera.  
Selecting "Auto-Print" automatically forwards the images stored in the virtual filmsheet to the laser camera. This optimizes the workflow, eliminating the need for user interaction. In addition, a specific layout can be configured on the virtual filmsheet, which the user can review and edit on the monitor at any time. As a result, printing is only required after the layout has been optimized on the monitor, saving time and costs.

Options:

- DICOM Query/Retrieve

### Note concerning DICOM interface(s)

For diagnostic purposes only hardcopy cameras/laser printers expressly approved for this system may be used.

The description in the DICOM Conformance Statement, which can be downloaded from the Internet, is binding for the functionality of the DICOM interface(s) exclusively.

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case that available configurations are not sufficient. The agreements according to the product maintenance/service contract apply to

## Description

any costs incurred by necessary interface configurations.

### Siemens Remote Service

Prepared for optional Siemens Remote Service SRS™ (exclusively with service contract):

- Hardware and software remote diagnosis.
- System remote configuration, e.g. adding of a DICOM node.
- The functions are made available as part of the maintenance contract package.

### Flat panel detector

Mobile, wireless flat detector (wi-D) for image acquisition, 3543pR, CsI scintillator, amorphous silicon (a-Si).

- Detector acquisition matrix approx. 3,000 x 2,364 (7 million pixels).
- Pixel size 144 µm
- Acquisition depth (gray scales) 16 bit.
- Acquisition formats up to 34.0 cm x 43.2 cm (13.4" x 17").
- Data transmission via W-LAN or backup cable.
- Wireless use for approx. 2 hours.
- Detector weight 4.8 kg
- Max. load 135 kg (patient lying down) and 100 kg (patient standing).

The wireless detector is charged automatically when kept in the storage compartment in the radiography system.

Highly selective anti-scatter grid for scattered radiation reduction:

- Pb 5/85 (grid ratio 5:1, 85 lines/cm).
- Grid focusing for SID 115 cm.

Keyboard for entering text and control commands in English, for service and application

This SW license enables the Workplace System to support enhanced user and system management, including:

- user authentication to prohibit unauthorized access
- privileges to define user/role based functionality
- permissions to control data access
- audit trails to log system and data access

Alternative set of batteries with 40% greater capacity of 65 Ah, for max 200 acquisitions at 70 kV / 20 mAs, max. stand-by time of 12 hrs. when switched on, and max. travel distance of 27 km / 16.7 miles.