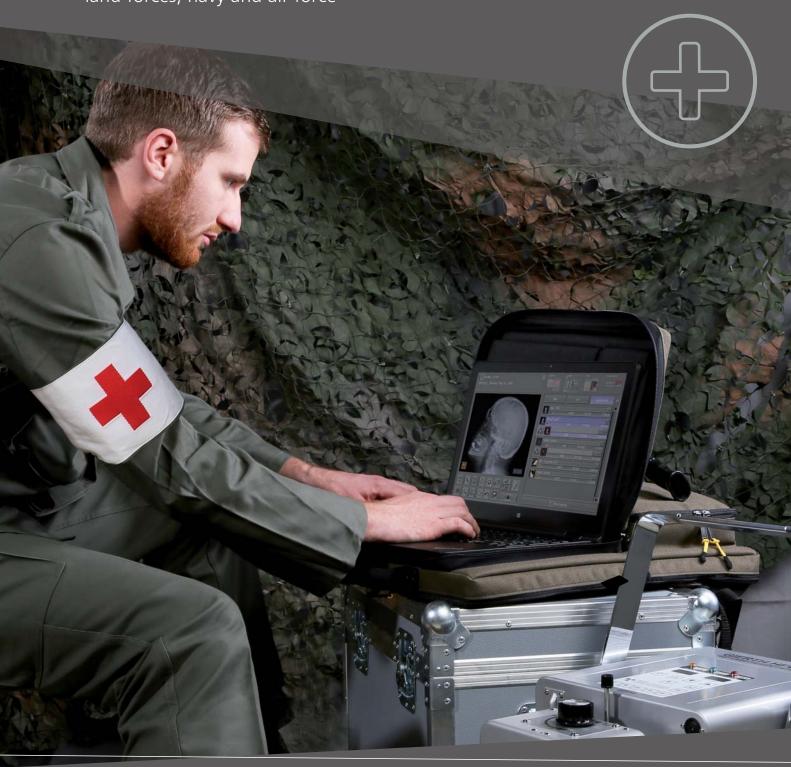
## Digital X-ray systems and image management

for mobile and stationary medical facilities for land forces, navy and air force





## Digital X-ray images at any place

on land, air and water

	Compact, lightweight suitcase and backpack	
	solutions for wireless and portable X-ray imaging	
	Amadeo X-ray systems	page 13
	Mobile & stationary full systems as well as portable	
	X-ray units for digital radiography without cassettes	
	Medici DR retrofits	page 23
	Digital retrofits for existing stationary and	
	mobile X-ray systems	
	X-ray accessories	page 27
	Mobile stands, cassette holders, and X-ray tables (partly	
	collapsible and mobile) designed to make work effortless	
	and more efficient	
DX-R	dicomPACS®DX-R X-ray acquisition software	page 33
	Acquisition and diagnostic software for X-ray systems with	
	user-friendly graphical interface	
	dicomPACS® image management and diagnostics	page 39
	Software for processing, transferring and	
	archiving images	

Leonardo DR suitcase systems

page 7



All X-ray systems have already proven themselves hundreds of times and are in NATO member states as well as in various crisis areas and at sea worldwide. and at sea, or are in service in their home countries.



## Many excellent reasons

#### to place your trust in OR Technology

#### Active since 1991

... as a manufacturer of digital X-ray equipment and developer of image management systems. Our professional solutions are used in over 140 countries for stationary and mobile radiography, medical image management (PACS) and cloud-based archiving.

#### Comprehensive know-how

... based on decades of experience developing software for digital image processing in combination with specialised expertise in X-ray technologies. Close working relationships with physicians and universities significantly contribute to our innovative approaches.

#### Made in Germany

... means excellent quality and first-rate service for hardware and software.

#### Exceptional image quality

... made possible by excellent image processing using our inhouse-developed acquisition and image management software and Al-based automatic measurement tools as well as the valuable experience we have gained from several thousand successful digital X-ray system installations.

#### User-friendly handling

... even for personnel with limited training. The multimedia X-ray positioning guide assists with patient positioning and software settings.

#### Best service

... for customers and distribution partners.

OR Technology does not rely on external call centres. A support team with over 20 employees offers multilingual information and assistance (e.g., in Arabic, English, French and Spanish).

#### Low maintenance

... because there are no mechanical parts in the X-ray system that require regular upkeep (system dependent).

#### Ideal

... for all applications; whether lightweight systems for mobile hospitals and smaller mobile medical facilities, compact all-round X-ray units for hospitals or small X-ray systems for confined spaces. OR Technology has the widest product range on the market.

#### Tried and trusted

... worldwide. OR Technology's X-ray systems and software meet highest international quality standards.

#### Corporate sustainability

... with equal emphasis on environmental, social and economic aspects. Every day we rise to the challenge of developing our company in a sustainable manner and creating a positive working environment for our employees. We continuously strive to minimize our ecological footprint.







## Compatible & certified

#### X-ray systems and software from OR Technology

### International coding standards for correct display and readability of images and documents

Of course, our X-ray software as well as our PACS supports cross-national exchange with a uniform encoding to avoid unnecessary conversions as well as compatibility and display problems. We use international encoding standards such as UTF-8 for the DICOM standard and for the encoding of local characters and other formats. This means that DICOM images, documents etc. can be read and correctly displayed by any partner.

#### International certification standards

The successful certifications of the systems from Oehm and Rehbein vouch for the fact, that the strict, structured processes in research, development, production, sales and service and service have been consistently adhered to. This always guarantees you a consistent consistent, traceable quality of our products and services.



Nato code CJ168 and PIN no. 6525-01400



Quality Management System ISO 13485



CE certification according to the European Regulation EU 2017/745



510(k) clearance by the FDA for:

- dicomPACS<sup>®</sup>
- dicomPACS®DX-R
- dicomPACS®DX-R with various X-ray detectors
- Amadeo M-DR mini



MDSAP Certification Canada, USA and Australia



HSA Certification Singapore for:

- dicomPACS®DX-R
- Medici DR systems







## Compact suitcase and backpack solutions for your mobile medical devices

The extremely lightweight Leonardo DR suitcase and backpack solutions represent a digital and space-saving complement to portable X-ray units and also an opportunity to transition from CR to direct digital radiography. All necessary components, including cables, are neatly tucked away in the suitcase or backpack. Just open the case, turn on the machine – and off you go!

This compact solution allows excellent images in DICOM format to be created, processed, analysed and archived in no time flat. The straightforward user interface enables all personnel to produce optimal X-ray images. The system functions under almost all environmental conditions and requires very little maintenance. Several different imaging surface areas are available for the Leonardo system.

The professional  $dicomPACS^*DX-R$  acquisition software sports an intuitive and modern graphical user interface. All examinations can be conveniently conducted from a single monitor and all X-ray parameter settings are automatically transferred to the generator (optional).  $\rightarrow$  See detailed description of software beginning on page 33  $dicomPACS^*DX-R$  generates images of outstanding quality and can be adapted to individual customer needs. High-performance image processing allows organ-specific optimisation. The integrated X-ray positioning guide assists with patient positioning and software settings for each examination. Furthermore, the  $dicomPACS^*DX-R$  software can readily be interfaced with existing patient management systems.



#### 📋 Leonardo DR mini III

You want long wireless X-rays and large, razor-sharp X-ray images?

## The gold standard among the X-ray cases

**Leonardo DR mini III** – very light X-ray system with large monitor and extremely long battery life

The new star of our Leonardo X-ray suitcase series combines everything you want from a highly functional X-ray system. Specially designed for medical service providers, disaster relief and home care services, the Leonardo DR mini III is fantastically lightweight. You can X-ray endlessly without recharging and view the razor-sharp X-ray images on a large Full HD touchscreen monitor. The common standard rechargeable batteries can be purchased anywhere in the world.

The integrated diagnostic and acquisition software guarantees excellent image quality.

→ See description of software on pages 33-37 The well-padded top shell of the case offers sufficient storage space for the protected transport of a 35 x 43 cm X-ray detector including a protection case.

#### What makes this X-ray case so unique?

#### Flexible detector sizes

Sufficient space for all 25 x 30 cm and 35 x 43 cm X-ray detectors incl. protection box

#### **Large images**

Anti-glare 21,5" (Full HD 54.6 cm) touchscreen monitor (no laptop)

#### **Extremely long battery live**

Up to 500 shots without charging

#### Very low case weight

Despite large HD monitor only 9.5 kg (plus detector)

Razor-sharp X-ray images thanks to globally proven image processing

Further detailed information on the eonardo DR mini III can be found here:









Searching for a rugged, portable digital solution to complement your existing mobile X-ray equipment?

## Super lightweight backpack X-ray system

**Leonardo DR nano** - one of the lightest portable X-ray solutions worldwide for emergency medicine

The Leonardo DR nano consists of only two components: a wireless X-ray detector and a laptop with integrated acquisition and diagnostic software.

→ See details on pages 33-37

Weighing just under 8 kg (including carrying case, laptop, accessories and flat panel detector), the system is one of the lightest portable X-ray solutions worldwide. It is ideal for ambulatory digital radiography, any time and anywhere. Getting tangled up in annoying cables is a thing of the past! Working in confined spaces is no longer a problem.

After use, the system is stored in a rugged, custommade and efficiently designed backpack. The system can easily be carried to any location, even across uneven terrain in the field.

Further information about Leonardo DR nano is available here:









Reliable X-ray units for military hospitals and mobile medical facilities with lightweight, all-terrain systems as well as fully motorised stationary X-ray systems

We offer a select range of certified X-ray systems for various Army and Navy applications. Designed for use in mobile hospitals and tent-based medical facilities, these lightweight, mobile or portable systems are easy to transport and ready for use in a matter of minutes.

The **stationary X-ray systems for military hospitals** inspire with the fully motorised workflow and a compact design for small spaces. All X-ray systems have have already proven themselves hundreds of times and are in use in NATO countries as well as worldwide in various crisis areas and at sea or are performing their service in the home country.

The professional image processing software produces images of outstanding quality and can be adapted to special customer needs. High-performance image processing allows organ-specific optimisation and guarantees top-quality X-ray images. Everyday veterinary care is made easier by an array of integrated functions (e.g., a multimedia X-ray positioning guide) and an intuitive design. Furthermore, the *dicomPACS\*DX-R* software can readily be interfaced with existing patient management systems.

→ See detailed description of software beginning on page 33

In addition, we offer portable, lightweight monoblock X-ray machines for greater flexibility. The generator's integrated interface for connecting to digital X-ray detectors makes these portable Amadeo systems suitable for a wide range of radiographic applications.





You are looking for a lightweight, completely digital solution for use in mobile hospitals and smaller mobile medical facilities?

## Mobile X-ray system for hospital and outdoor use

**Amadeo M-DR mini** - for use in the field as well as for bedside examinations and intensive care stations

The Amadeo M-DR mini system includes all necessary components, including our globally proven acquisition and diagnostic software package with a convenient X-ray guide for optimal patient positioning.

→ See detailed description of software on pages 33-37

X-ray exposures of all sections of the human trunk are possible. The Amadeo M-DR mini can be easily transported due to its low overall weight and compact design. Our modern digital X-ray system can be employed wherever it is not possible to quickly transfer patients to a hospital for diagnostic radiology. The system can easily be pulled over steps, swivelled in all directions, and does not tip over on uneven ground.

Further information about Amadeo M-DR mini system is available here:



The Amadeo M-DR mini meets all your your requirements:

#### Light & mobile:

flexible and location-independent use - system is one of the lightest mobile and wireless complete X-ray systems worldwide

X-ray technology "Made in Germany": durable, low-maintenance and crisis-proof

#### Optimal stability and robustness:

including splash-proof compartments, no external cable guides

#### **Uncomplicated transport:**

System is easy to transport and fits into a normal station wagon - System can be easily pulled over stairs, can be turned on the spot

Automatic, Al-based thorax screening, to detect various lung diseases\*

Very safe: excellent lead shielding - only low case leakage, therefore reducing the monitoring range to only 1.5 m.\*\*

Uninterrupted operation in case of power failure and voltage fluctuations due to integrated rechargeable battery

#### Protected during long transports:

Loading is very easy, without lifting the system, via an integrated drive ramp - system can be transported completely (final assembly is not required)

#### Your smartphone as remote control

via app or planning and viewing images during the X-ray process



<sup>\*</sup>optional - connection Al-supported thorax screening through use of a qualified third-party provider
\*\*dependent on the selected X-ray source





Searching for a portable X-ray unit for mobile, emergency and stationary stationary use?

## Lightweight, portable X-ray generators

**Amadeo P** - High-frequency X-ray generators for field hospitals and military medical service

High-quality X-ray images are no longer a problem for portable monoblock X-ray units. Modern high-frequency technology offers high performance in miniature format using only standard power connections (220V/110V).

Low weight, user-friendly operation, and an integrated interface for connecting to digital X-ray detector systems make the Amadeo P ideal for wide range of applications in field hospitals and mobile hospitals.

Amadeo P X-ray units are available with and without batteries. Wireless models without batteries offer unhindered mobility.

Further information about the Amadeo P units is available here:



#### Amadeo Z motorised

Looking for a compact, digital X-ray system for low ceiling heights that allows all radiological positions?

### Fully motorised, digital Z-arm X-ray system

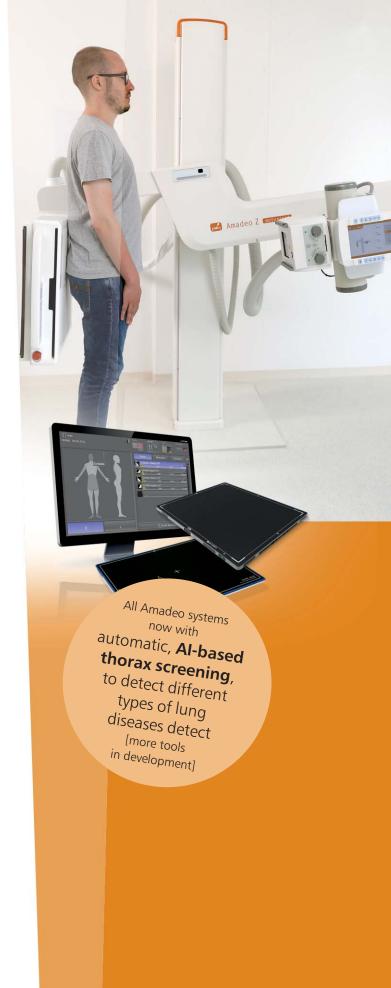
#### Amadeo Z motorised -

economic and space-saving system for low ceiling heights

The digital U-arm system (for low ceiling heights from 2.40 m) ensures effortless and accurate positioning of the stand by means of five electric motors and is operated via an integrated 10" touchscreen display console. They are suited for all radiographic examinations, including full spinal and leg imaging via stitching. An optimised workflow saves time and personnel resources. The entire system is controlled via our professional acquisition and diagnostic software, dicomPACS®DX-R. → See detailed description

of software on pages 33-37

Special features are the wireless remote control, asynchronous shifting of bucky tray and tube, an easy straight alignment of bucky or swivel arm due to the automatic 0° positioning as well as an LED indication when the desired position is reached.



Further information about the Amadeo Z motorised system is available here:







Are you looking for a versatile digital X-ray system for your military hospital, optimised for small rooms?

## Fully motorised system with table and wall stand

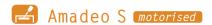
**Amadeo R motorised** - universal motorised X-ray system with floating table top for confined spaces

The versatile, motorised X-ray system which convinces through simple control and handling. An intuitive 10" touch screen display simplifies system operation. The digital X-ray system is suitable for all X-ray exposures in sitting, lying and standing positions and has approx. 60 semi-automatic preset positions of stand height, alignment and SID. X-ray staff quickly become familiar with the procedures and the use of our professional acquisition and reporting software  $dicomPACS^*DX-R$ .  $\rightarrow$  See detailed description of software on pages 33-37 The X-ray tube and bucky tray of the grid wall stand are designed to be lowered to the floor. The X-ray tube follows automatically if there are no objects in the way. The 6-position height-adjustable X-ray table has a high load-bearing capacity so that even larger

patients can be examined without any problems.

Further information about Amadeo R motorised system is available here:





Interested in equipping your medical practice with a full system, perfect for X-rays of patients in sitting, standing and lying positions?

### Partly motorised U-arm X-ray system

**Amadeo S motorised** - reliable and compact X-ray equipment for wireless and fixed flat panel detectors

The motorised U-arm X-ray system includes all necessary components and functions for digital X-ray imaging without cassettes. Both its compact design and the minimum ceiling height of only 2.40 m make the system perfectly suited for small rooms. All important settings and operating operations are performed via an integrated 10" touchscreen console. The very flexible and partially motorised positioning of the stand allows a wide range of images to be acquired. These can be taken on sitting, standing or lying patients (table optional). Both bucky tray and tube can be rotated. All necessary device positions can be pre-defined on the 60 available program slots to ensure quick positioning on the patient. The dicomPACS®DX-R control panel operates the entire X-ray system.

→ See detailed description on pages 33-37



Further information about the Amadeo S motorised system is available here:







You need a digital X-ray system, especially for images of sitting and standing patients [thorax, lung, etc.]?

### X-ray system for taking standing X-rays

**Amadeo T** - X-ray system for confined spaces for taking thorax and other standing X-rays

All images of sitting or standing patients can be taken effortlessly. The X-ray source and the bucky drawer of the grid wall stand can be lowered to the floor. Options such as motorised auto-tracking can optimize work.

Simple operationand handling guarantee fast training of the X-ray personnel and ensures perfect chest and other X-ray images of standing and sitting patients. The entire system is controlled by our professional acquisition and diagnostic software dicomPACS®DX-R

→ See detailed description of software on pages 33-37

The compact design allows installation in the tightest of spaces.

Further information about the Amadeo T system is available here:



#### 🚄 Amadeo C Systems

Interested in equipping your medical practice with a universal full system and practical ceiling mount?

### Ceiling-mounted system with Bucky table and wall stand

Amadeo C - the professional solution with height-adjustable patient table for precise imaging

The Amadeo C ceiling-mounted X-ray system with Bucky wall stand and height-adjustable Bucky table makes positioning patients effortless for even the most complicated exposures. The system can be configured to fit into almost any room. The floating table top of the height-adjustable Bucky table with high load-bearing capacity is ideal for routine examinations. The Bucky wall stand can be set up as a free-standing unit, is equipped with electromagnetic brakes, and can be used for full spine X-rays.

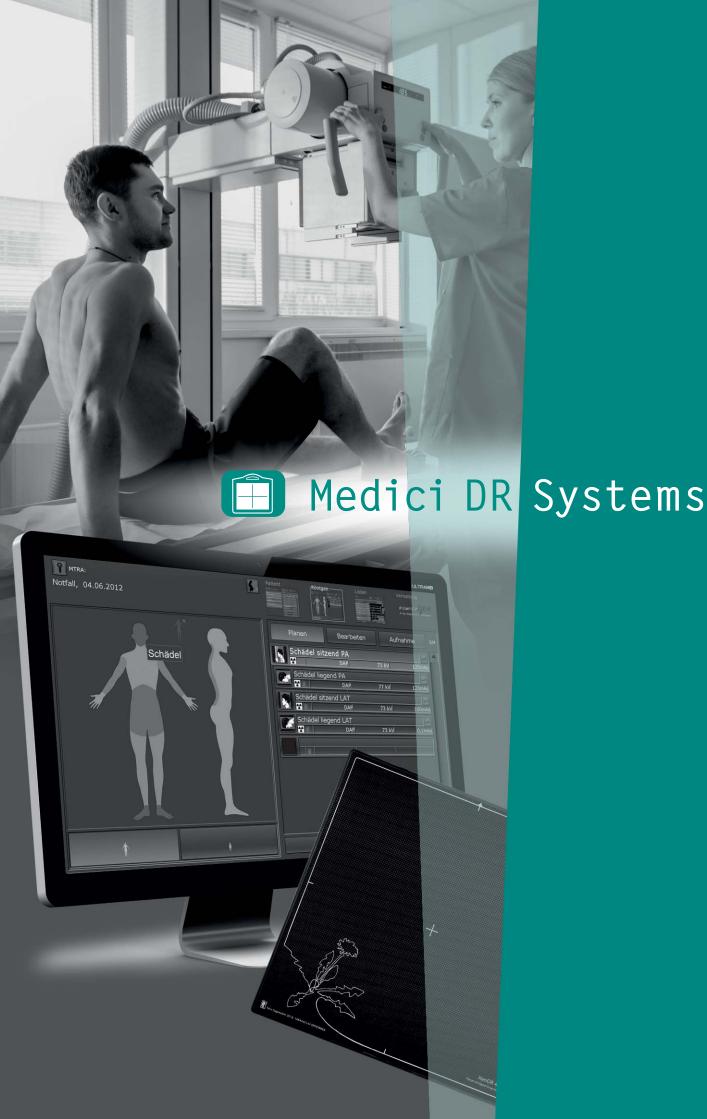
The dicomPACS®DX-R operating console controls the entire X-ray system: from operating the X-ray generator to the finished superb quality image for diagnostic evaluation. → See detailed description

of software on pages 33-37



Amadeo C system







### Flat panel retrofit kit (DR) for transitioning stationary and mobile X-ray systems to digital

Medici DR systems make it easy to switch from conventional stationary and mobile X-ray units to digital radiography. Automatic exposure detection (AED) eliminates the need to access the X-ray unit or make manual adjustments to the system and cable connections during installation. The system is just as easy to install as computed radiography (CR) units. The DR retrofit kit significantly optimises your workflow — X-ray images appear on the screen within seconds of exposure. Cassettes are no longer required. Customise your X-ray system to meet your needs by choosing the perfect flat panel detector from a wide array of makes and sizes.

The dicomPACS®DX-R image acquisition software has a touchscreen interface, is easy to operate, adapts to your workflow, and reliably produces outstanding X-ray images. → See detailed description of software beginning on page 33 The software is used to control all functions of the X-ray system. The automatic, user-specific image processing makes post-processing virtually unnecessary.

All Medici systems can be integrated into your practice management software and programmed to transfer X-ray images to an image management system (PACS). Should you not have access to an image management system yet require images to be distributed (e.g., within your medical practice / hospital or to colleagues / patients via internet), our *dicomPACS*® image processing system offers file sharing.





#### Medici DR Systems [stationary]

Interested in transitioning your conventional, stationary X-ray system to digital with minimal effort?

## Upgrading stationary X-ray systems

... with a **Medici**-System: Trouble-free digital retrofits with tethered flat panel detectors

Digital radiography does not automatically require investing in an entirely new system. Upgrade your X-ray system to digital with a Medici retrofit – easy to install, straight-forward to operate, and no need for manual adjustments or modifications.

The system pays for itself within a short period of time and produces digital images of diagnostic quality. We offer a wide selection of flat panel detectors for customising your system.

The integrated control console operates the entire X-ray system: from generator control to high quality images for diagnostic evaluation.

→ See detailed description of software on

pages 33-37

Further information about Medici updates [stationary] is available here:



#### Medici DR Systems [mobile]

Interested in upgrading your current mobile X-ray unit to digital?

### DR upgrade for mobile X-ray equipment

... with a **Medici** system: digital X-ray images of diagnostic quality

Digital systems are the norm in hospitals and medical practices. If you are now looking to transition your mobile X-ray equipment to digital, our Medici DR upgrade kit is your best bet. Medici systems are available for nearly every mobile X-ray unit manufactured. Customise your X-ray system to meet your needs by choosing the perfect flat panel detector from a wide array of makes and sizes. The user-friendly acquisition and diagnostic software produces images of outstanding quality and can readily be integrated with your existing workflow using laptops, touchbooks, tablets or Ultrabooks.

→ See detailed description of software on pages 33-37 The Medici DR system can also be integrated with an existing patient management software and can transfer X-ray images to Picture Archiving and Communication Systems (PACS).



Further information about Medici updates [mobile]







## X-ray equipment for individual requirements in mobile, emergency medical & stationary use

Mobile and stationary X-ray systems are subject to the need to be able to carry out the X-ray process easily, quickly and safely. Systems, tables and stands should allow comfortable work and be adapted to your patients.

You can choose from a wide range of variants and systems for different radiological applications.

For use in mobile medical facilities, OR Technology provides you with an exclusive selection of foldable, lightweight equipment, with which you are quickly ready for use in medical emergencies. The X-ray accessories have been specially designed for this purpose and meet all requirements for stability and comfort.

Also for inpatient use, you will find in our portfolio a wide selection of patient positioning tables, mobile stands, cassette holders and much more.

The X-ray accessories offered by OR Technology can be combined with all DR and CR systems in our product range as well as the software solutions.





Are you looking for a lightweight, foldable patient positioning table with transport box?

## Foldable X-ray table for mobile systems

High-quality patient table for mobile X-ray systems - set up in two minutes

This patient positioning table was developed according to your specifications and wishes for mobile medical stations. The table weighs only 48.5 kg\* and can be transported to the site of operation in a standard transport box with castor wheels, including a compartment for storing the detector and accessories. Two people are needed to assemble and disassemble the table in just two minutes without tools.

This table has braked ESD castors, a moveable infusion holder and a moveable detector holder for side mounting. The bucky tray can be moved freely under the entire table surface. Additionally the detector can be rotated 90° for pelvic exposures.

The detector, including the protection case, fits into the bucky tray, which also has a holder for a removable grid. for a removable grid.

Further information about top-quality X-ray tables is available here:



#### X-ray accessories

Searching for radiographic stands for your mobile or stationary X-ray system?

## Mobile stands, cassette holders & wall mounts

Accessories for maximal flexibility during ambulatory and stationary examinations

Variation in patient size represents a significant challenge for manufacturers of radiography equipment and accessories. All our X-ray accessories, including mobile stands, wall mounts and various other stands, offer maximal convenience and flexibility. OR Technology's X-ray equipment is compatible with all DR and CR systems on offer, as well as with our software solutions.

- Collapsible mobile stands for portable X-ray units, assembly in less than 10 seconds
- Collapsible mobile stands for X-ray detectors (DR) and CR systems
- Spring arms for mounting portable X-ray units on walls or ceilings
- Diverse stands for cassette holders, medical carts, knee supports, etc.



Further information about mobile stands and cassette holders







Searching for an extremely lightweight detector holder for ambulatory X-ray examinations?

## Smallest mounting system for detectors

**VersariX** - detector holder with mounts for attachment to doors, walls, tent poles and tree branches

VersariX is a portable detector holder for X-ray examinations in medical tents, mobile stations or ships etc. In these confined spaces, it is usually problematic to install a mobile stand to hold the X-ray detector. Similarly, transporting a folding mobile stand is not advantageous for many operations due to the weight and space requirements.

This is where VersariX comes in. It weighs only approx. 400 grams and can be attached anywhere, for example to doors, walls, trees or the like.

The stable hook on which the X-ray detector is hung is almost infinitely height-adjustable. All images can be taken professionally and comfortably all images from the skull to the thorax and thorax to the foot.

Further information about detector holder VersariX is available here:





Have you gone digital but still require diagnostic-quality X-ray films?

# X-ray film printer for diagnostic-quality images

Production of X-ray films from digital data without the use of chemicals

Thanks to the latest printing technology, highquality X-ray films can now be produced without the use of developer and fixation chemicals.

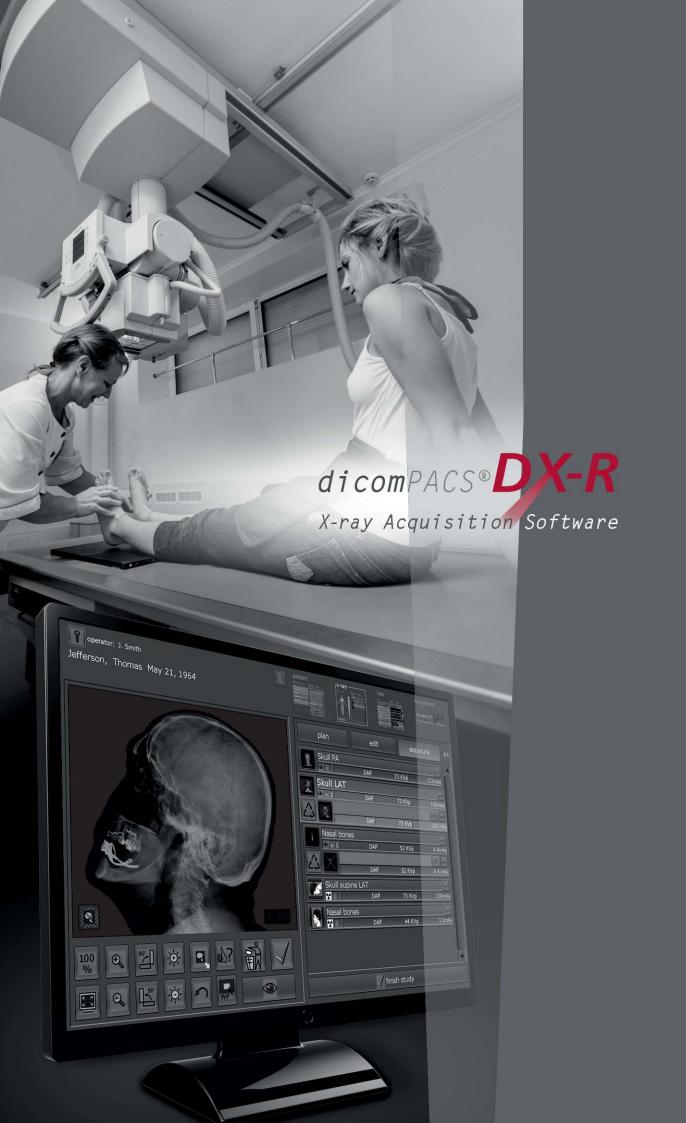
Laser imager technology brings significant benefits to healthcare facilities in terms of performance, cost and quality. The affordable printers offer consistently low operating costs throughout their entire service life. Due to the small space requirement, the compact X-ray film printers can be simply placed on a desk or counter or can also be used on the move. Operation is extremely simple. The film can be inserted in normal daylight.

The X-ray film printers can be used for various modalities (e.g. X-ray, MRI, CT, etc.) in practice and clinic.



Further information about X-ray film printer is available here:











The professional acquisition and diagnostic software for static and dynamic X-ray with DR and CR systems

dicomPACS®DX-R is an acquisition software for X-ray systems for static and dynamic imaging with a straightforward and user-friendly graphic interface controlled via touchscreen and/or mouse. The software package is included in all Amadeo, Leonardo, Medici and Divario systems (exept Amadeo P systems). The software also controls the operation of X-ray generators and X-ray units, and thus establishes a structured and efficient workflow.

Of course, the software applies international coding standards that ensure correct display and readability of images and documents across countries.

dicomPACS®DX-R's professional image processing produces images of outstanding quality and can be adapted to special customer needs. The high-performance software includes organ-specific optimisation, which further enhances image quality.

Everyday medical care is made easier by multiple integrated functions – including a multimedia X-ray positioning guide – and an intuitive design. The software can be extended with optional software modules, such as Chiro Tools (diagnostic tools for optimal treatment) and the NUCCA tool set.

Furthermore, the *dicomPACS®DX-R* software can readily be integrated with existing patient management systems. X-ray images can be evaluated using the dicom*PACS®* viewer module within the acquisition software. Thus, the system can function as a fully-fledged diagnostic work station with the option to upgrade to a PACS (Picture Archiving and Communication System).



→ detailed description of the software:

#### Benefits of our internationally proven acquisition software:

- Modern graphical user interface (GUI), readily adaptable to new languages
- **Touchscreen operation** ensures quick, efficient and structured workflow
- Patient data is captured via DICOM Worklist, BDT/GDT, HL7 or other protocols – data can also be captured manually
- **DICOM procedure codes** are used to transfer all data relevant to an examination directly from associated information management systems (e.g., HIS/RIS)
- Body parts already stored in the system can be freely configured using over 400 projections and a multitude of parameters
- Reliable and guick registration of emergency patients
- Enables single image acquisition as well as the acquisition of image sequences (dynamic X-ray)
- The order of scheduled examinations can be modified to avoid unnecessary patient repositioning
- Images can be appended to an examination record later
- Automated, Al-assisted diagnostic tools (connection of thorax screening by a qualified third-party provider - optional), additional tools in preparation
- Additional functions, such as the Chiro-Tools module (diagnostic tools for the best possible diagnosis) and the NUCCA tools set for examinations according to NUCCA standards and much more...
- Macros for frequently reoccurring examinations (e.g., thorax screening)
- Fully integrated multimedia radiographic positioning guide for all examinations including helpful hints, photographs, videos and sample X-ray images
- Wireless remote control of the digital X-ray system; with worklist, preview thumbnails and much more...











### Benefits of flexible image acquisition:

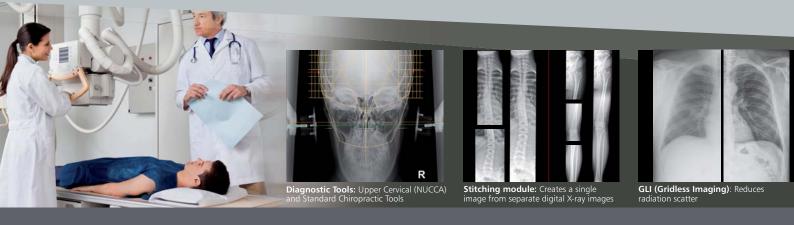
- Integration of various flat panel and CR systems (including dental systems)
   produced by different manufacturers, includes an electronic X-ray log (optional)
- User-configured generator interface can control X-ray generators and X-ray systems from many manufacturers, generator settings are adjusted via software
- Parallel operation of flat panel and CR systems is a standard feature of the system. Users can choose whether the next exposure is taken by the flat panel or the integrated CR system. This flexibility also functions as a excellent backup in case of a defective flat panel detector.
- Integrated dose area product (DAP) meter; DAP measurements are automatically saved to the image
- All X-ray parameters can be automatically adjusted for each projection using AEC (automatic exposure control) and APR (anatomical programmed radiography); manual adjustments are also possible

#### Automatic image processing for optimal quality

- Perfect images at all times using the automatic image optimisation of the integrated software –
   further adjustments are rarely necessary
- Professional image processing that can be adapted to meet the needs of each examination and customer
- Our image processing has special features that provide virtually constant image quality under a wide range of X-ray parameter settings (allows for dosage reduction)
- Bones and soft tissue in the same image details of fine bone and tissue microstructures
   significantly improve diagnosis

Further information about the acquisition software is available here:





→ detailed description of the software:

#### The **dicom**PACS®**DX-R** Cognition Optimised Processing (COP) comprises:

#### ADPC – automatic dead pixel correction

Automatically eliminates dead pixels – this reduces the need to calibrate the flat panel

#### AIAA – automatic image area analysis

Automatically analyses each image for soft tissue and bone structures and applies the most suitable image processing algorithms

#### MFLA – multi frequency level analysis

Analyses each image on various frequency levels for ideal sharpness and high subtle contrast

#### ANF – automatic noise filter

Algorithm for optimal noise reduction

#### GLI – gridless imaging

Exposures without grid: enables the display of an image as if it had been taken with a grid – this is useful for supine chest exposures (bedside).

#### AGLS - automatic grid line suppression

Automatically removes gridlines from flat panel images – suitable for grids from 100 LPI to 200 LPI

#### IBC – intelligent brightness control

Automatically displays the image at the ideal level of brightness

#### ACO – automatic contrast optimisation

Automatic contrast equalisation across the entire image – this enables the optimal display of soft tissue and bones at the same time

#### ABBS – automatic black border shutter

Automatically darkens all parts of an image outside the collimated area – varying degrees of transparency are available and manual adjustments are easy to make.





**Dynamic X-Ray:** Imaging and diagnosis/ archiving of image sequences



**Professional Image Processing:** Always perfect images, no adjustment necessary



**Standard annotations:** Various measuring and labeling tools



Prosthesis documentation: Operation planning and docum

Now with

Automated,
Al-based thoracic
screening to detect
different types of
lung diseases
(optional)

#### Special measurement tools and filters:

Digital X-ray images have the advantage that exact measurements can be made at the computer monitor and that image processing techniques can be used to improve image quality. *dicomPACS\*DX-R* offers an array of special software tools:

#### Pre-operative planning with the prosthesis documentation module (optional)

This module facilitates planning and documenting operations. Active images are displayed in the size of the original (identical to analogue film images). The prosthesis template can be displayed on the image as an annotation or existing prosthesis template films can be held in front of the monitor.

#### **Upper cervical (NUCCA) and standard chiropractic tools** (optional)

The NUCCA tool set and Chiro Tools were developed in cooperation with leading NUCCA experts from the USA and Canada. The NUCCA tool set enables quick and accurate diagnosis without significant changes in your workflow. Chiro Tools improve diagnosis and assist in treatment planning, e.g., by generating centre lines and points, fitting arcs and providing angle measurements.

#### Gridless imaging (GLI) - X-ray exposures without grid

The elimination of image-degrading scatter radiation functions as a virtual grid and can be used instead of a physical grid for all body parts, including thorax, abdomen, skull, spine and pelvis as well as upper and lower extremities.

#### Image stitching module (optional)

This feature automatically assembles separate X-ray images with high geometric accuracy to form an overall image with no visible suture lines (e.g., full-leg and full-spine images).

#### Useful tools and additional functions

Practical aids such as a configurable measuring magnifier, window levelling, zoom functions and various filters and an automatic automatic, Al-based thorax screening facilitate diagnosis. Powerful search tools enable effective comparisons among X-rays stemming from different examinations and patients.

Numerous further functions, including the calculation of Cobb's angle, pelvic obliquity measurements, and integrated diagnosis reports, round out this high-performance diagnostic software package.









# Innovative digital image management solution with carefully designed archive and backup solutions

dicomPACS® is a picture archiving and communication system that connects, controls and manages everything having to do with your X-ray images: ranging from exposure and imagine analysis to archiving and communication.

The *dicomPACS*<sup>®</sup> software can help your dream of a paperless practice come true. With *dicomPACS*<sup>®</sup>, images and all types of documents (e.g., medical findings and reports, faxes) are stored in a digital patient folder and readily accessible.

Our sophisticated archive and backup solutions guarantee both quick access to all data and high security standards in keeping with international guidelines for human medicine. Furthermore, the *dicomPACS®* software can easily be integrated into all common practice management systems.

The dicomPACS® software provides solutions for the administration, diagnosis, transfer and archiving of images. The program was designed, developed and tested in cooperation with medical practitioners in order to provide a sophisticated, user-friendly tool for everyday diagnostics.

With thousands of installations worldwide, the system has proven itself many times over. *dicomPACS*<sup>®</sup> is the perfect solution for simple image processing tasks and complex radiological networks alike.





Searching for an intelligent image management system with a reliable archiving and backup solution?

## PACS basic package for professional image diagnostics

... An image management system ideal for editing, analysing, transferring and archiving images

In addition to basic functions such as image and patient management, image optimisation, and the ability to measure, highlight, edit, import, export and print, the *dicomPACS*® software includes a DICOM receive/archive module for DICOM images and a patient CD module that creates CDs from which patients can view their X-rays using a complementary viewer software. A module for connecting to film and document scanners is also included.

The basic version of *dicomPACS*® also contains several documentation modules, software tools for professional analysis of cross sectional images (e.g., CT and MRI), special filters, measurements tools, as well as diagnosis tools (e.g. Al-based thorax screening) for optimal treatment.

Further information about dicomPACS\* is available here:





# Benefits of the basic package at a glance

- dicomPACS<sup>®</sup> comes with a large number of special functions and modules (see detailed description on page 42) as well as professional software tools
- Fully functional versions of the diagnostic software at all work stations in your practice (no "light" versions)
- User-friendly interface, logical and intuitive structure requiring little training
- User interface can be individualised according to your specialisation and needs
- Flexible assignment of shortcut keys for many functions to expedite everyday tasks
- Parallel processing (e.g., image analysis can continue while burning a CD)
- All images and data are permanently available in the network – no need to store old images on CD
- "Perfect memory" images are reopened with all previous markings and settings (including zoom and orientation)
- Multiple windows can be opened simultaneously, allowing the concurrent analysis of several patient records without loss of performance - depending on computer hardware
- External documents including doctor's letters, faxes and X-ray imagines can be imported – no additional modules are required
- Installation possible on systems using Windows, UNIX, LINUX and Apple Macintosh operating systems
- Optimal data security, speed and compatibility made possible by standardised SQL database technology
- All images and documents are compliant with international DICOM standards







# Additional software modules

dicomPACS® is a so called "Picture Archiving and Communication System", acronym: PACS, and it performs many different, at times highly complex tasks. It connects, controls and administrates everything related to your images: from the acquisition of images and the compilation of diagnostic reports to the archiving and transfer of image data. It ensures that the images can be distributed quickly and without complications and viewed e.g. via the web server. In addition, the system is extremely flexible and open for many applications.

- Prosthesis documentation enables the user to plan operations with digital prosthesis templates by one or more manufacturers
- Report Module for easy preparation of different reports (e.g. operation reports, ultrasound reports etc.) incl. Word macros with images and a digital dictation system
- **Statistics Module** enables freely configurable analyses of the complete database
- Video Modules enable standard and nonstandard video signals to be recorded as single images and video sequences
- dicomPACS®MobileView enables image distribution within the hospital or to referring doctors via the internet and guarantees very fast image accessibility in original DICOM quality
- Processing of CT and MRI series dicomPACS<sup>®</sup> includes professional tools such as MPR and MIP to evaluate cross-section series
- Upper Cervical (NUCCA) Chiropractic Tool Set Tools for accurate diagnosis and planning of further chiropractic treatment
- Hanging protocols
- Special function for mammography analysis
- Integration of speech processing systems
- Telemedicine
- Special solution for multiple archives



Searching for a viewer that enables worldwide access to all image data, e.g., so that on-call hospital doctors can make a quick first assessment?

# Web-based viewer for all devices

Images and documents any time, anywhere

The web-based viewer *dicomPACS*\*MobileView is one of the many extension modules of the *dicomPACS*\* diagnostic software.

This application can be used with practically all browsers to view image material on mobile devices both in and outside of hospitals and medical practices. When connected to the internet, doctors and caregivers can access all image files worldwide using the *dicomPACS*® system.

In addition to image diagnostics, the viewer can generate and export diagnostic reports. Similarly, documents can be attached and exchanged using the software. When viewing a patient record, all reports for the patient are displayed. Individual findings may be selected, formatted and exported.



Further information about dicomPACS MobileView is available bere





## Global

# Digital solutions and international service for over 30 years

OR Technology has been active for more than three decades as a manufacturer of digital X-ray technology and developer of image management systems.

The company's know-how is based on decades of experience in the development of software for digital image processing, combined with special expertise in X-ray technology. A close dialogue with doctors and universities is an important part of Oehm und Rehbein's innovative activities.

Thanks to an international network of partner, OR Technology is present worldwide. No matter in which part of the world help is needed, an OR Technology service point is not far away.

## In use worldwide - satisfied users in the medical services of the army, air force and navy navy as well as various NGOs

OR Technology's track record includes several thousand installed X-ray and image processing systems at home and abroad. Satisfied customers in over 140 countries use the digital image management solutions developed by the German specialists (as of July 2023). Our systems are already in use:

- in the military medical service of the German Armed Forces
- in a field hospital of the Portuguese army
- on submarines of the Portuguese Navy
- in a mobile field hospital in the Namib Desert
- in the military medical service in New Zealand
- in mobile hospital containers of aid organisations
- in emergency medical stations in the Ukraine

... and many more. Ask us for references in your area!

## OR Technology

## www.or-technology.com | X-perts in X-ray

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