

Leonardo DR Systems

The wonderfully light, portable
Leonardo DR nano system for X-ray
examinations anywhere, any time



Optional: transport bag

Lightweight,
only 5.4 kg
and
wireless

The portable, light DR system for X-ray examinations



The lightest
X-ray system,
weighing only
5,4 kg

 **Leonardo DR nano**

Portable X-ray imaging: Superlight - only with X-ray detector and tablet PC

Just sling the lightweight **Leonardo** bag over your shoulder and you are perfectly equipped for your next portable X-ray examination.

The **Leonardo DR nano** consists of two components only, a wireless X-ray detector and a tablet PC. Weighing only 5.4 kg, the system is one of the lightest portable X-ray solutions worldwide. It supports users in both inpatient and outpatient digital radiography. Optional extras are the protective cover for the detector and the matching carry bag.

Due to its low weight and volume, the compact **Leonardo DR nano** system can be used almost anywhere - in home care, disaster control, for medical emergencies on ships, yachts and oil rigs as well as for military purposes.

The tablet PC complies with the latest standards and is equipped with state of the art **Leonardo** X-ray software. The multi touch display is non reflective and offers a resolution of 1.920 x 1.080 pixels.

The portable wireless X-ray detector, based on amorphous silicon (a-Si) with caesium iodide (CsI) scintillator, guarantees ultimate image quality, even at low radiation doses.

Benefits

Digital X-ray imaging with **Leonardo DR nano**

Wireless X-ray imaging

The X-ray detector is available in two sizes (10 x 12 inches and 14 x 17 inches) as a wireless version. If you use it with a battery powered HF X-ray generator, X-ray imaging will be completely wireless and portable.

Your benefit: Ready for operation in no time and no more tripping over cables.

The smallest and lightest DR system

The very compact **Leonardo DR nano** is housed in a well designed sturdy carry bag. Weighing only about 6.5 kg in total (including optional carry bag) it can easily be transported anywhere. Battery operated portable X-ray generators with a total weight of as little as 6.8 kg complete the system. The X-ray solution can be assembled quickly and easily on site.

Your benefit: Easy to transport, quick to set up.

Excellent image quality

The wireless detector boasts unbeatable image quality, based on a high resolution of approx. 5 lp/mm (100 μ m pixel resolution).

Your benefit: Fantastic images as a result of the latest know-how.

User friendly

The professional **dicomPACS® DX-R** acquisition software features an intuitive and state of the art graphic user interface. Examinations can be performed conveniently at the monitor.

Your benefit: Easy operation even if staff changes.

Fast

The X-ray image is ready for viewing and diagnostic evaluation as early as 6 to 8 seconds after the shot has been taken.

Your benefit: Fast workflow with optimal documentation.



Well thought through

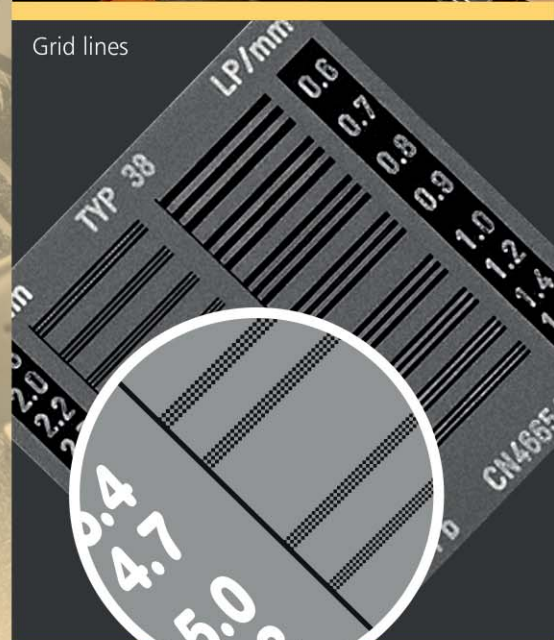
An integrated X-ray positioning guide provides information on the correct adjustment technique for each examination, including videos, photos, and sample X-ray images as well as many hints and tips.

Your advantage: Correct positioning and adjusting made easy.

Constant availability

The integrated diagnostic evaluation software offers worldwide, fast and cost efficient exchange of information (via Cloud and web based viewer solutions), considering and adhering to safety provisions for telemedical solutions - all that is required is internet access.

Your advantage: The fastest possible diagnosis by a specialist in emergency situations.



only approx.
5,4 kg

Functionality

Take X-rays wirelessly from now on

Restricted freedom of movement and tangled cables are now a thing of the past. The **Leonardo DR nano** system allows you to work comfortably even in difficult terrain or in small rooms.

The X-ray unit and the detector communicate wirelessly with the acquisition software of the tablet PC. For safe operation, the distance between the X-ray detector and the tablet PC may be up to 10 m!

After taking the X-ray, you can view the images instantly on the tablet PC or forward them to a specialist (via Cloud).



**Automatic synchronising of detector and generator by means of AED – no need to modify the X-ray system or adjust the system or the cable connections*

Safe and sound

Transport bag for the **Leonardo DR nano** system (optional)



- sufficient space for the 14" x 17" detector with or without a protective cover and tablet PC
- weight approx. 2 kg
- external dimensions 55.5 x 49 x 6 cm
- padded and fitted with a sturdy protective frame
- water repellent – safe in rainy conditions
- additional compartment to store the detector's battery charger and the power cable of the tablet PC
- including shoulder strap

Functional & light

Accessories for portable X-ray imaging

Portable X-ray detector bracket

In addition to the unbelievably light **Leonardo DR nano** X-ray solution OR Technology has developed a portable and compact detector bracket for room or wardrobe doors, walls etc. Especially suitable for use in old age homes, nursing care wards and in home care, this detector bracket offers enormous benefits. The normal heavy thorax stand is no longer required and will no longer need to be carried to the patient's bed. A room door is sufficient for taking almost any X-ray images of standing or sitting patients – while observing the relevant radiation protection regulations.



Benefits of the portable X-ray detector bracket:

- Height adjustable, suitable for taking almost any X-ray images of standing and sitting patients
- The X-ray detector, placed in its protective cover, can be safely attached to the mounting bracket
- The detector bracket, folded up to save space, fits into the **Leonardo** carry bag (optional)



Collapsible mobile stand for portable X-ray units

The collapsible mobile stand can be assembled in less than 10 seconds. It is approved for use in human medicine, it can be swivelled left and right and is height adjustable. The mobile stand is suitable for taking almost any X-ray images of persons in a standing or prone position.



Specifications:

- Swivel arm 750 mm
- Swivel range of the arm 5 degrees to the left, 5 degrees to the right
- Height adjustable up to 1.71 m
- For X-ray units of 5.0 to 15.0 kg
- Dimensions 30 x 35 x 105 cm (folded up)
- Weight approx. 15 kg

Protective housing for the detector for perfect stress X-rays of patients in a standing position

- Protective housing for 14" x 17" detectors
- Maximum surface load of 1,040 kg on the entire imaging area
- Maximum point load of 146 kg per mm



Software

Advantages of the professional *dicomPACS*[®] *DX-R* X-ray acquisition software

- Modern graphical user interface (GUI) adaptable to almost **any language**
- Capture of patient data via **DICOM Worklist, BDT/GDT, HL7** or other protocols – data may also be captured manually
- Use of **DICOM Procedure Codes** for the transfer of all relevant examination data directly from the connected patient management system (HIS/RIS)
- **Freely configurable** body parts with more than **200 projections** and numerous possible adjustments
- Safe and fast **registration of emergency patients**
- Allows the user to **switch between examinations** of a patient, for instance to avoid having to re-position the patient frequently
- Integrated **measuring, special image filters and many other tools** for measuring and image optimisation
- Allows the user to **subsequently add images** to an examination, even after that examination has already been completed
- Entry of recurring **examination procedures as macros**, e.g. thorax screenings
- **Fully integrated radiographic positioning guide** for each examination in human and veterinary medicine incl. comprehensive notes, photos, videos and correct X-ray images
- A single work station with installed *dicomPACS*[®] *DX-R* software may be upgraded by the following options (selection):
 - Tools for taking images of an entire leg (full spine) or an entire spine (**image stitching**)
 - Planning and working with **digital prostheses templates/ operation planning**
 - Connection of several diagnostic monitors
 - Capturing additional patient and examination data and their freely configurable statistical evaluation

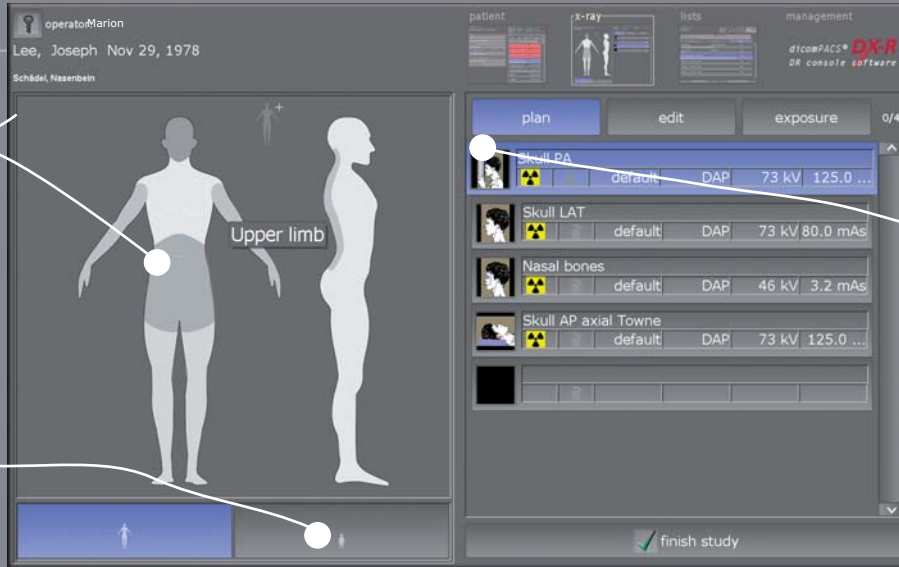


Chart for the planning of an individual X-ray job

Switch to the planning of X-ray jobs for children

The correct settings for adults and children at a mouse click

dicomPACS®DX-R job creation



Video with sound for the step by step positioning of the patient

Shows an example of a correct X-ray image

Presentation of helpful hints for the positioning of the patient, central beam, tips and tricks, frequent errors etc.

dicomPACS®DX-R radiographic positioning guide



Preview of the current X-ray image

Opens examples of inaccurate X-ray images with comments

Preview of the X-ray image and worklist in dicomPACS®DX-R

Software

Cloud-based telecommunication solution and data archiving for images, documents and diagnostic evaluations for stationary and mobile applications

Even for state-of-the-art practices and hospitals, the rapidly rising data flood of digital images, diagnostic reports and other documents is becoming increasingly challenging. Current legislation demands safe and long-term storage of patient data which generally requires investing in expensive hardware infrastructure as well as maintenance and corresponding staff costs.

To this end, we developed the **ORCA** Cloud archiving solution, thus paving the way for cost-effective and safe Cloud-based data archiving in practices and clinics. **ORCA** offers two application options:

- Safe, long-term archiving of patient data with intelligent usage of internal databases
- Communication platform (exchange of images and diagnostic reports) with colleagues and specialists or as an easy way to forward image data to patients (an alternative to creating patient CDs)

Data is **exclusively** archived on European servers with the relevant safety certificates.

Benefits of Cloud archiving through **ORCA**



Minimal expenditure: **ORCA** does not require investing in expensive infrastructure such as server and data cables.

Scalability: The amount of memory required when using **ORCA** is determined by the demand.

Long-term security: **ORCA** archives data on many individual European servers in professional and air-conditioned data centres. Server technology is continuously updated.

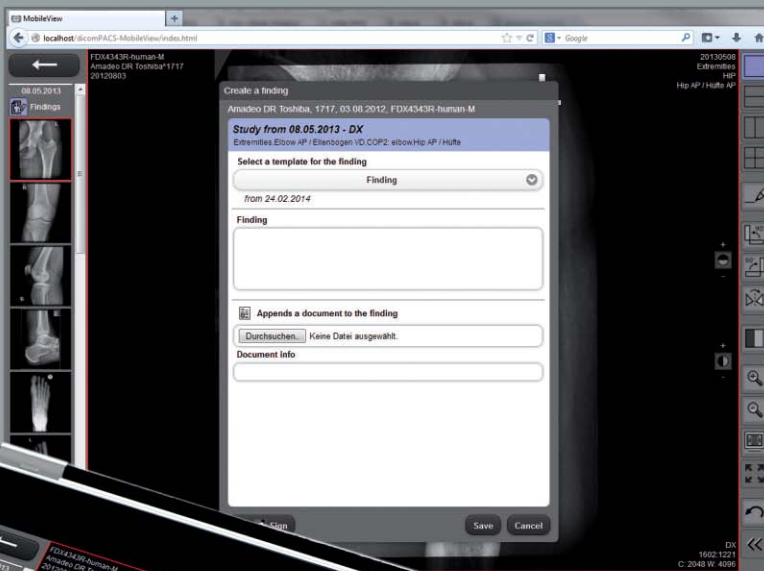
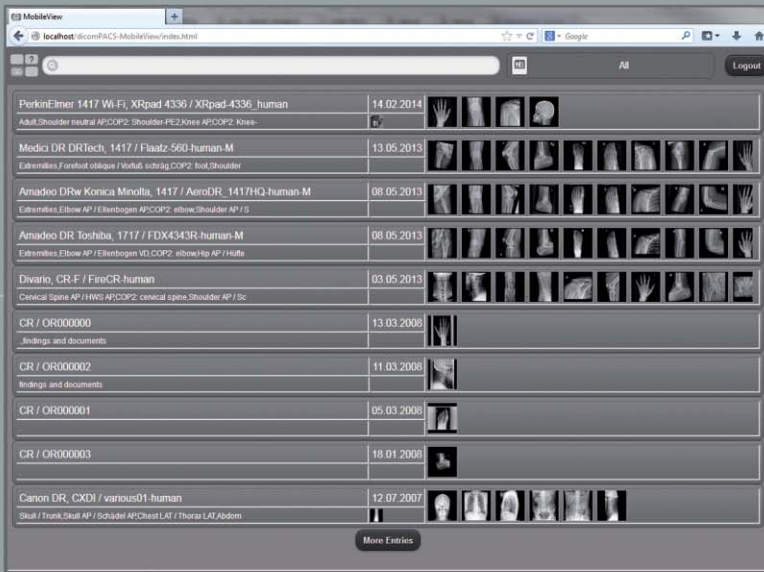
Accessibility: **ORCA** stands out by being highly accessible. Since data is saved with multiple redundancy, **ORCA** guarantees more continuity than a mere server solution.

Environmentally friendly: **ORCA** is sustainable – through the optimised use of resources and their distribution.

Location-independent: **ORCA** guarantees access to archived patient data – worldwide.

Simplicity: **ORCA** allows easy access to data from any computer – from your place of work, from the comfort of your home or from any other computer or tablet PC.

Stress-free: **ORCA** deals with everything – no need to struggle with loose network cables, removed hard drives or software problems.



Features of ORCA online viewer:

The web-based viewer offers an important range of functions of a professional PACS viewer:

- Draw annotations
- Measurements
- Registration of diagnostic findings
- Attach documents
- Draw lines and arrows (multi-coloured)
- Compare images in different grids
- Adjust brightness/ contrast
- Flip and rotate images
- Adjust brightness / contrast
- Invert, zoom in / out
- Full screen, fit image
- PAN
- Scroll through image series
- Cine loop for multi frame series and CT/ MRI
- Export images and documents
- Print images and documents

Software

Automatic image processing for optimal quality with **dicomPACS® DX-R** image processing

- Perfect images at all times - generally **no adjustment** required
- Integrated software for **automatic image optimisation**
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for the needs of each customer
- Due to specially developed processes, the image processing allows the user to **vary the X-ray settings on a large scale** while the image quality remains virtually the same (**possibility of reducing the dosage**)
- **Bones and soft tissue** in one image - this enables the user to significantly improve his diagnosis
- **Details of bones and microstructures are very easy to recognise**
- Noise suppression
- **Black mask** (automatic shutters)
- Automatic **removal of grid lines** when using fixed grids



Exposure with **standard** image processing



Exposure with **dicomPACS® DX-R** image processing

Perfect X-ray images
anywhere, any time



Alternative

Amadeo M-DR: the compact, mobile complete DR solution – wireless or tethered

Do you need a mobile and light complete direct digital X-ray system which combines all the components in one unit?

The **Amadeo M-DR** is a light yet robust portable X-ray system with integrated DR X-ray detector. Owing to its design features, it is ideally suited for use in the most varied conditions. It is also a reliable partner in difficult local conditions, for instance in deserts or confined spaces.

It offers the full range of X-ray diagnostic imaging options for human patients. The entire design follows the principles of mobility and lightweight construction using predominantly aluminium components as well as modern plastics and some stainless steel components for parts under static stress.

All the components required for the X-ray process are combined in one unit and sealed to guarantee safe transport. The 6kW HF generator (monoblock version) ensures unsurpassed performance from 40 to 120 kV. The integrated electronics system box includes a high performance PC, a high resolution 19"HD multi touch monitor and can house different sized detectors.



For more details visit
www.or-technology.com

The **Amadeo M-DR** system is:

- a complete mobile X-ray system utilising tethered and wireless DR detectors
- CE certified and approved for any human X-rays
- unrivalled on the global market in terms of efficiency, size, weight and compact design, providing excellent X-ray images under the most varied conditions
- light, mobile and highly versatile (only about 98 kg)
- 98 x 134 cm in size (maximum height setting 165 x 193 cm)
- a highly efficient X-ray system – thus providing the complete range of X-ray diagnostic imaging options for human patients
- very easy to clean since all electronic components are sealed to ensure safe transport
- set up and ready for use in less than two minutes
- achieving top performance in terms of X-ray technology due to its excellent protective lead shield, reducing the controlled area during the X-ray process to as little as 1.5 m
- a reliable partner even under extreme climatic conditions such as high humidity or large temperature fluctuations

 Amadeo M-DR







All components are combined in one unit.

Amadeo M-DR

Scope of delivery

The standard **Leonardo DR nano** system contains the following components:

Components	Leonardo DRw nano 1210 mobile system with wireless flat panel [available Q1/2015]	Leonardo DRw nano 1417 mobile system with wireless flat panel	
<p>Tablet PC CPU Intel® i7, 8 GB RAM, 256 GB SSD hard drive, 1920 x 1080 resolution, 31.7 cm (12.56") non reflective multi touch display, mini HDMI, USB 3.0, wireless LAN 802.11 b/g/n</p>		<p>✓</p>	<p>✓</p>
<p>Direct radiography detector 24 x 30 cm (10" x 12") wireless <i>Wireless X-ray imaging!</i> • fits into the existing bucky tray without any modifications (same size as X-ray film cassettes) • pixel distance/microns: 100 µm</p>	<p>available Q1/2015</p>	<p>✓</p>	<p>—</p>
<p>Direct radiography detector 35 x 43 cm (14" x 17") wireless <i>Wireless X-ray imaging!</i> • fits into the existing bucky tray without any modifications (same size as X-ray film cassettes) • pixel distance/microns: 100 µm • resolution/pixels: 3556 x 4320, exposure area: 432 x 355 mm</p>		<p>—</p>	<p>✓</p>
<p>Battery charger including batteries • fast charging, long life batteries, including battery charger • charging time of battery: 3 hours</p>		<p>✓</p>	<p>✓</p>
<p>Leonardo DR nano software package with dicomPACS® DX-R, professional console software with modern graphical user interface including basic software package and integrated radiographic positioning guide for each examination, inclusive: • dicomPACS® DX-R DICOM Send SCU • dicomPACS® DX-R DICOM Patient CD • dicomPACS® DX-R Cognition Optimised Processing</p>		<p>✓</p>	<p>✓</p>

Optional components to upgrade the Leonardo DR nano system

Components

DRw nano 1210

DRw nano 1417

Portable X-ray detector bracket

- Height adjustable, suitable for taking almost any X-ray images of standing and sitting patients
- The X-ray detector, placed in its protective cover, can be safely attached to the mounting bracket
- The detector bracket, folded up to save space, fits into the Leonardo carry bag (optional)



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Protective housing for the detector (for patients in a standing position)

- Protective housing for 14" x 17" detectors
- Maximum surface load of 1,040 kg on the entire imaging area
- Maximum point load of 146 kg per mm



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Protection case

- Available in various sizes
 - for detectors 35 x 43 cm (14" x 17")
 - for detectors 24 x 30 cm (10" x 12")
- Including or excluding grid



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Transport bag

- For 14" x 17" detectors with or without protective cover
- External dimensions 55.5 x 49 x 6 cm
- Padded and fitted with a sturdy protective frame
- Water repellent – safe in rainy conditions
- Additional compartment to store a cable
- Including shoulder strap



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Portable high-frequency X-ray generator PORTA100 HF

- 30 mA / 40-66 kV / 20 mA / 68-100 kV
- Compact and light (approx. 16.0 x 16.1 x 30.0 cm)
- Weight: 9.2 kg



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Portable high frequency X-ray generator PORTA120 HF

- 40-120 kV/ 0.3-100 mAs
- Compact and light (approx. 16.0 x 20.3 cm x 35.0 cm)
- Weight: approx. 13 kg



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High frequency X-ray unit TR 90/20 Battery

- Battery operated HF X-ray unit with pulse frequency modulation
- 40 - 90 kV
- Dimensions: approx. 26.5 cm x 22.0 cm x 18.0 cm
- Weight: 6.8 kg



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Amadeo P high frequency X-ray unit 200/ 400

- Monoblock units with fully automatic adaptation to different voltage networks
- Effective output of 6 kW at 100 kV (QUANTpower 400 up to 120 kV)
- Dimensions: approx. 37.0 cm x 24.5 x 2.15 cm, weight: 11.5 kg



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Mobile X-ray tables and stands

Large selection of X-ray stands and new generation portable systems to make your work easier and more comfortable. Please ask us!



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Portfolio

Overview - products of OR Technology



Medici DR Systems

DR retrofits - digital upgrade set for existing X-ray systems incl. **dicomPACS®DX-R** acquisition software, also available for stationary and mobile X-ray machines



Leonardo DR Systems

DR suitcases - compact suitcase solutions for portable X-ray incl. **dicomPACS®DX-R** acquisition software



Amadeo X-ray Systems

Complete digital X-ray systems (incl. stand, bucky, generator, flat panel incl. **dicomPACS®DX-R** acquisition software etc.) as well as mobile and portable X-ray solutions



Divario CR Systems

CR solutions - CR systems for digital X-ray with cassettes incl. **dicomPACS®DX-R** acquisition software



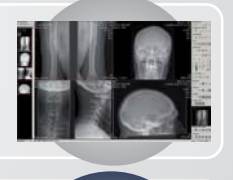
X-ray Accessories

Accessories for X-ray (e.g. radiation protection walls, gloves etc.)



dicomPACS®

Image management (PACS) - comprises acquisition, processing, diagnosis, transfer and archiving of image material



ORCA

Cloud-based archive solution - safe, long-term archiving of patient data with intelligent usage of internal databases, communication platform with colleagues and specialists and transfer of image data to patients



dicomPACS®DX-R
X-ray Acquisition Software

X-ray acquisition software [only for OEMs] - acquisition and diagnostic software for X-ray images from flat panels or CR systems



Digital X-ray and
Imaging Solutions

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