

# ddRFormula<sup>®</sup> Series

---



**Productivity**  
*beyond expectations*

**Swissray** 

Digital Radiography from Swissray

---

## Because we simply *care more*

Swissray pioneered the development of DR technology more than twenty years ago. It has always been our commitment to exceed expectations and care more about everything we do. We care more about delivering ultimate workflow efficiency while providing excellent image quality. We care more about providing ease-of-use and seamlessly integrated user interfaces. But most of all, we care more about the technologist's needs and the patient's comfort. That's why health care providers and patients around the world rely on Swissray's superior quality and highly efficient digital radiography.



## Superior performance *delivers superior quality*

The *ddRFormula*® is Swissray's innovative C-arm designed digital radiography system. Featuring the exclusive APS™ – Automated Positioning System – it is the most automated DR solution in the marketplace. All system movements are motorized and software-controlled resulting in total automatic functionality. The *ddRFormula*® features a C-arm design with the X-ray tube always centered to the detector for fastest, most precise and convenient patient positioning. The *ddRFormula*® Plus version allows for convenient off-detector imaging.

Variable SID (FFD)

LCD panel with system positioning information

*ddArt*™ backlit cover

C-arm design

FP-5000™ a-Si flat panel detector

### Features

APS™ – Automated Positioning System

Image preview in 3 seconds

Considerably exceeds the workload of cassette-based systems

Single focus eXpertStitching™ for orthopedic imaging

Off-center imaging

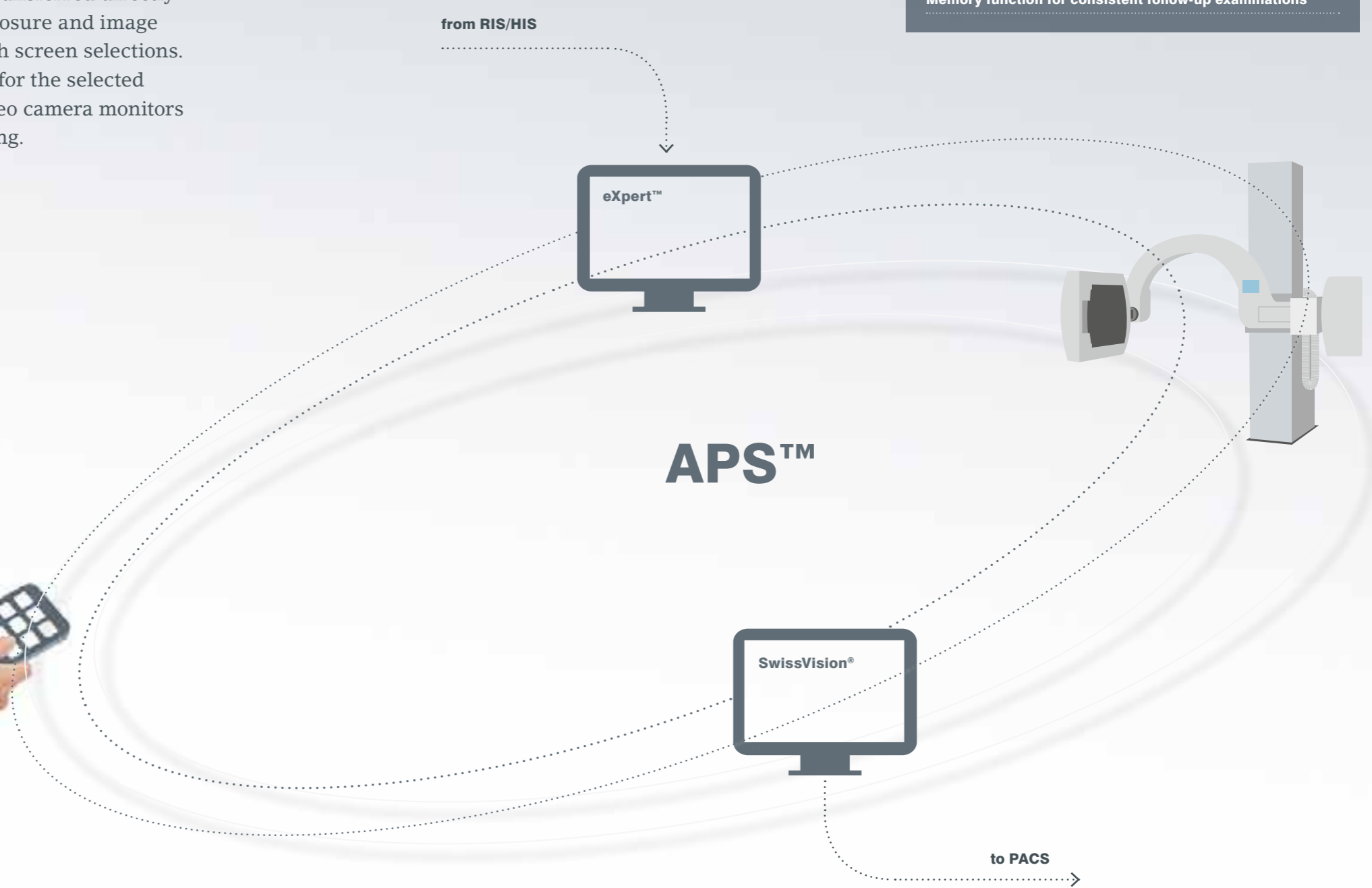


## Total system automation for ultimate workflow efficiency

Swissray's unique APS™ – Automated Positioning System – streamlines the radiography workflow process by automating all positioning and image acquisition requirements. Patient data can be transferred directly from the RIS/HIS via DICOM worklist, while all exposure and image processing parameters can be chosen with simple touch screen selections.

Swissray's advanced robotics positions the system for the selected examination by remote control while an integrated video camera monitors the patient to ensure correct positioning.

- APS™ features**
- Handheld remote-controlled system positioning
  - 1,296 pre-programmed, fully customized positions
  - Advanced robotics for selected examination
  - Integrated video camera to monitor patient and ensure positioning
  - Memory function for consistent follow-up examinations







**FP-5000™ detector features**

.....

3.5lp/mm spatial resolution

.....

43 × 43cm (17" square) format for large-field requirements

.....

Excellent DQE

.....

Carbon fiber casing lowers radiation dose requirement

.....

Five field measuring chamber

.....

Featuring floating frame shock absorber for maximum panel protection

.....

## FP-5000™ Detector

.....

# More detail detectability *less radiation dose*

With 3.5lp/mm spatial resolution and excellent DQE, Swissray's FP-5000™ silicon (Si) flat panel detector delivers superior diagnostic image quality at lowest possible radiation dose. It combines amorphous silicon technology with a cesium iodide scintillator, providing excellent detail detectability. The panel protection mechanism provides superb collision protection thus eliminating concerns over reliability of flat panel technology.



### Ultimate panel protection in case of a collision

The floating frame shock absorber and an energy-dampening mechanism absorb and dissipate impact energy.



### Removable grid

Swissray's grid can be conveniently attached and removed in any detector position.

### eXpert™ control desk

The eXpert™ control desk automates every aspect of the radiographic procedure. Patient demographic data is transferred directly from RIS/HIS via DICOM worklist while all exposure and image processing parameters can be chosen with a few touch screen selections.

#### eXpert™ features

Intuitive and easy-to-use touch screen interface

Fully customizable GUI with integrated organogram editor

MPPS (Modality Performed Procedure Step): work orders are received directly from RIS/HIS via DICOM

Protocol-driven: individual parameter preferences can be stored for multiple users

## Seamless connectivity *means faster workflow*

### SwissVision® workstation

The SwissVision® modality workstation comprehensively manages all patient data. Open system architecture and «IHE» proven DICOM 3.0 compliant interfaces seamlessly integrate with existing and future network connections like PACS, RIS, local workstations and modality archives.

#### SwissVision® features

Functions such as windowing, leveling, zoom, rotation and positive/negative displaying

Image preview in 3 seconds

Automatic algorithm selection minimizes post-processing requirements

Patient data stored in DICOM header for future examinations

Repeat/reject examination analysis

Exposure index to monitor image quality in relation to radiation dose



«The C-arm design from Swissray has been very helpful in positioning our pediatric orthopedic patients. They don't seem to be threatened at all by the equipment and it's easy to get those difficult views that are hard to convince a child, are important.»

John Strain MD, Dept. Chairman, The Children's Hospital, Denver CO, USA



#### Pediatric imaging solutions

The *ddRFormula*® performs off-center imaging for orthopedic and pediatric applications.

#### Advanced Imaging Applications

## Specific needs *require specific solutions*

Children are among the most important beneficiaries of Swissray's low radiation dose. The pediatric package includes 3.5 lp/mm spatial resolution with special imaging algorithms and X-ray parameters providing unrivalled image quality with highest detail detectability. In addition, the built-in eXpertView™ camera is especially useful for pediatric applications. With the ability to perform the examination in a fraction of the time, Swissray has minimized much of the fear and anxiety associated with pediatric imaging.

Special chest imaging parameters and algorithms make the *ddRFormula*® the diagnostic tool of choice for pulmonary disease detection. Health care providers around the globe have chosen Swissray DR systems for their TB screening programs.



#### Chest imaging

Special chest imaging algorithms provide unmatched diagnostic information.

## Single focus stitching *for higher accuracy*

Ever since Swissray introduced DR to orthopedics, we have been the trusted digital radiography solution for hospitals and imaging centers of all sizes. The *ddRFormula* performs orthopedic imaging by accurately combining up to four adjacent images. With Swissray's single focus stitching technique, the position of the X-ray tube remains fixed with respect to the patient over the time sequence of images. This ensures the overlap regions are geometrically equivalent, resulting in identical images of the anatomy.

Swissray's stitching studio software automatically combines the single images and allows the technologist to manually correct the image alignment by panning or fiducial placement. Image blending options also create the look of a single exposure. Additionally, small patient motion between exposures is easily corrected. Orthopedic studies such as scoliosis and long leg imaging are conveniently performed with more efficiency and higher accuracy than ever before.



### **eXpertStitching™ workstation**

The touch screen user interface is designed to complete highly accurate orthopedic examinations such as long leg and scoliosis imaging with the fewest steps possible.



### **SwissVision® stitching studio software**

The software automatically combines up to four adjacent images. Small patient motion between exposures is easily corrected.



.....  
**Fixed X-ray tube**

While the detector moves, the X-ray tube remains fixed with respect to the patient.





ddArt™

.....

## Enhancing the ambience *creates a positive experience*

ddArt™ is an exclusive backlit design on the front cover of the system.

Artwork such as sports themes, cartoons or institutional banners can be selected or customized. ddArt™ greatly enhances the ambience of the radiographic examination room, thus creating a positive patient experience.



### **Creativity in the examination room**

For a more personal touch, panel design can be customized.

## More versatility *for more productivity*

Motorized X-ray tube rotation enables off-detector imaging on cassette-based media for the occasional patient that cannot be transferred to the imaging table.

This feature is exceptionally useful with emergency room applications.



Distributed by

Swissray Medical AG reserves the right to make changes in specifications and/or to discontinue any product at any time without prior notice or obligation and will not be liable for any consequences resulting from the use of this publication. Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

© 2012 Swissray Medical AG  
All rights are reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright holder.

SHM\_35\_700\_001\_07\_EN 11/12

**Swissray Medical AG**  
Turbistrasse 25–27  
CH-6280 Hochdorf  
Switzerland

Phone +41 41 914 12 12  
Fax +41 41 914 12 13  
info@swissray.com  
www.swissray.com

**Swissray** 