



*DiRex*TM A Complete Digital Imaging Solution



*DiRex*TM

Unmatched flexibility, workflow and value

Quantum Medical Imaging and Agfa HealthCare have combined their expertise to develop Digital Integrated Radiography (DiR), a completely new approach to digital x-ray imaging. *DiRex*TM, the result of merging together Quantum's advanced TechVisionTM with Agfa's exclusive DirectriXTM imaging technology into a single, superior point-of-care system for digital imaging.

Quantum Medical Imaging's Premium Q-Rad Radiographic or Universal System Agfa HealthCare's State-of-the-Art DX-S Digital Imaging System

Together, these technologies are *DiRex*TM: the only solution offered in today's market that delivers the image quality and workflow benefits of direct radiography combined with positioning flexibility inherent of a cassette-based system. Improved workflow, excellent image quality, and flexibility equal exceptional patient care, offered at an affordable total cost of ownership (TCO).

The *DiRex*TM Series is the result of merging together imaging technologies from two of the premiere leaders in the digital imaging industry, resulting in a single, superior point-of-care system for digital imaging.





Clinical benefits mean a healthy ROI *DiRex™ offers a unique set of benefits to virtually any clinical setting*

Improved delivery of patient care

- Exclusive TechVision tube-side image preview and x-ray parameter control enables technologist to spend more time at patient side
- Measurable reduction in exam time improves overall patient experience while accelerating throughput

Enhanced imaging performance

- Exclusive technologies consistently produce images of remarkable quality, enhancing diagnostic confidence
- Superior dose sensitivity provides the potential to reduce the patient x-ray dose without compromising image quality

Faster throughput

- Single operator control provides one-step anatomical selection of all x-ray techniques and image processing factors
- Tube-side display allows control of all x-ray parameters and also provides image preview increasing the technologists proficiency
- Rapid detector scanning reduces wait times for digital image detectors and provides fast access to digital images
- In-room quality control reduces exam time and retakes while improving overall image quality

Outstanding scalability

- *DiRex™* is configured to meet a wide range of clinical and budgetary needs

Proven clinical flexibility

- Portable “cassette style” digital image detectors enable traditional positioning improving patient comfort, while optimizing workflow in a variety of clinical settings

Cost effectiveness

- Improved workflow, clinical flexibility, high image quality and exceptional cost of ownership contribute to a sound return on investment

DiRex™ an integrated digital imaging solution turns technological synergies into tangible clinical benefits.



Proven technology powering innovation

DiRex™, an integrated digital imaging solution combining advanced technologies from Quantum Medical Imaging and Agfa HealthCare:

Agfa DX-S Digital Imaging Plates

- DirectriX™ needle-based detector technology uses an advanced crystal phosphor that allows higher packing density and layer thickness, as compared to powder phosphor used in traditional system design
- The higher absorption and conversion efficiencies result in remarkable image quality at a lower dose level. The system DQE is twice that of conventional CR and higher than or equal to most DR systems available
- The matrix dramatically reduces light spread in the scintillator layer, minimizing scattering



Agfa DX-S Scanhead™ Technology

- Scanhead technology enables high resolution scanning of the DirectriX detector with a scanning resolution equal to 50 µm (20 pixel/mm)
- Line-to-line scanning provides an accelerated read-out resulting in a fast preview image and a high cassette throughput
- The compact design integrates stimulation and light collection into one convenient Scanhead module

Agfa NX Integrated Operator Control

- Quantum's high frequency x-ray generator is conveniently integrated with Agfa's NX workstation providing a single, intuitive interface through which the technologist can access patient information and complete all standard exam tasks
- NX delivers a high level of integration with other hospital systems including HIS, RIS and PACS
- With the touch screen monitor, the radiographer can complete all standard tasks quickly and effortlessly
- Intuitive interface design, provides more flexibility and efficiency
- With Agfa's Advanced Musica²™ image processing, the radiographer spends significantly less time making image adjustments, allowing for faster image delivery. The in-room integration means a more convenient workflow for the radiographer throughout the imaging process

The DX-S digitizer provides precision image quality with high scanning resolution as a result of two innovative technologies: Scanhead and DirectriX™



MUSICA²™, automatically optimizes bone and soft tissue visualization with outstanding sharpness and contrast in the finest details to minimize the need for post-processing and to increase workflow efficiency



Typical X-Ray Image



MUSICA²™ Image

Agfa MUSICA²™

- MUSICA²™, intelligent image processing algorithm automatically optimizes bone and soft tissue visualization with outstanding sharpness and contrast in the finest details to minimize the need for post-processing and to increase workflow efficiency
- MUSICA²™, second generation MUSICA which intelligently renders exceptional bone and soft tissue detail simultaneously
- MUSICA²™ analyzes the image data before applying optimal contrast and density to all details within the image. Results in maximum radiographic detail throughout the image, greatly reducing the need for manual activities such as window and level

Higher Image Quality

- Image processing optimized to the response of human visual system, results in higher image quality, autonomy and robustness. Enhance bone and soft tissue detail, displayed in a single image, eliminating contrast or density compromise

Increased Workflow Capability

- Processes the image automatically, virtually eliminating the need for routine window and leveling, allowing the technologist to stay close to the patient

Improved Care and Throughput

- Greater image detail and quality helps radiologists to make diagnoses more quality and with a higher level of confidence, ultimately providing an efficient patient care experience

Typical X-Ray Image

MUSICA²™ Image



Exclusive technologies consistently produce images of remarkable quality, enhancing diagnostic confidence.

Digital Integrated Radiology redefining digital imaging



Quantum's TechVision
produces digital works of art in record time

Quantum's TechVision Technology

- Tube-side adjustment of technique parameters and image preview streamlines exams and enhances patient care
- Image preview is displayed at the TechVision control, soon after the digital image detector is scanned. This allows the technologist to see the actual image while remaining close to the patient
- The blending of these unique technologies within the *DiRex*TM system provides a fluid workflow, low patient dose, outstanding image quality, faster throughput and ultimately an improved patient experience with significant ROI

Higher Image Quality

- A multi-color (16 Bit; 800 x 600 Pixel; 8.4" display) touch screen provides crystal clear digital image preview with the flexibility to initiate re-takes right at table-side

Increased Workflow Capability

- Ability to view and set up technique parameters right at the tube-side streamlines the imaging process by eliminating typical "back-and-forth" trips from the generator's operator control panel to the patient

Improved care and Throughput

- Controlling technique parameters and previewing images at tube-side decreases overall examination time while allowing the technologist to remain close to the patient throughout the entire exam

Quantum Radiographic Systems

- Designed with precision and reliability through "Smart-System Design" Technology, featuring high patient weight capacity, FAIL-SAFE electromagnetic braking systems, collision avoidance electronics and EZ-Glide hand controls
- Radiographic systems designed for hospital emergency rooms, imaging centers and orthopedic facilities. These systems meet the demand for maximum flexibility and high quality for all types of imaging exams
- System flexibility with a wide selection of configuration and extensive options to accommodate all types of radiographic environments. Systems can meet various room size requirements, as well as different facility budgets

Ceiling Mounted System



Floor Mounted System



Universal System



Quantum *DiRex*TM offers a variety of system configurations to meet a variety of imaging requirements.

DiRex™



Quantum Medical Imaging

- Proven technology in thousands of clinical installations worldwide
- Broad range of product offerings allow customized configuration to meet unique clinical and budgetary requirements
- Rugged and reliable digital imaging solutions for even the most demanding environments
- Reduced exam times and better patient due to Quantum's exclusive Techvision technology

Agfa HealthCare

- Established leader in CR imaging solutions
- Improved workflow with intuitive NX software
- Enhanced image quality and consistency with MUSICA²™ image processing
- Designed for reliability
- Seamless integration with various hospital systems



Together = *DiRex*™

- Unsurpassed image quality
- Quality solutions, so you can achieve the workflow you need
- Reliability you can depend on from the leading companies you know and trust
- Exceptional value, for your digital imaging system solution



How does an organization earn the title of industry leader? Impeccable products and support are expected, but only industry leaders maintain unwavering commitment to innovation, such as demonstrated in *DiRex™*.

Quantum Medical Imaging and Agfa HealthCare have combined their innovative concepts and advanced technology to create a world class digital imaging system, *DiRex™*. Disrupting the traditional decision making process, *DiRex™* offers a high value digital imaging solution with an affordable total cost of ownership. By merging incredible image quality and workflow with a flexible, convenient, cost-effective radiographic system, *DiRex™* clearly proves that some traditions were meant to be broken.

Start building your own tradition of success today.

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