

OREX Distributed CR (D-CR)



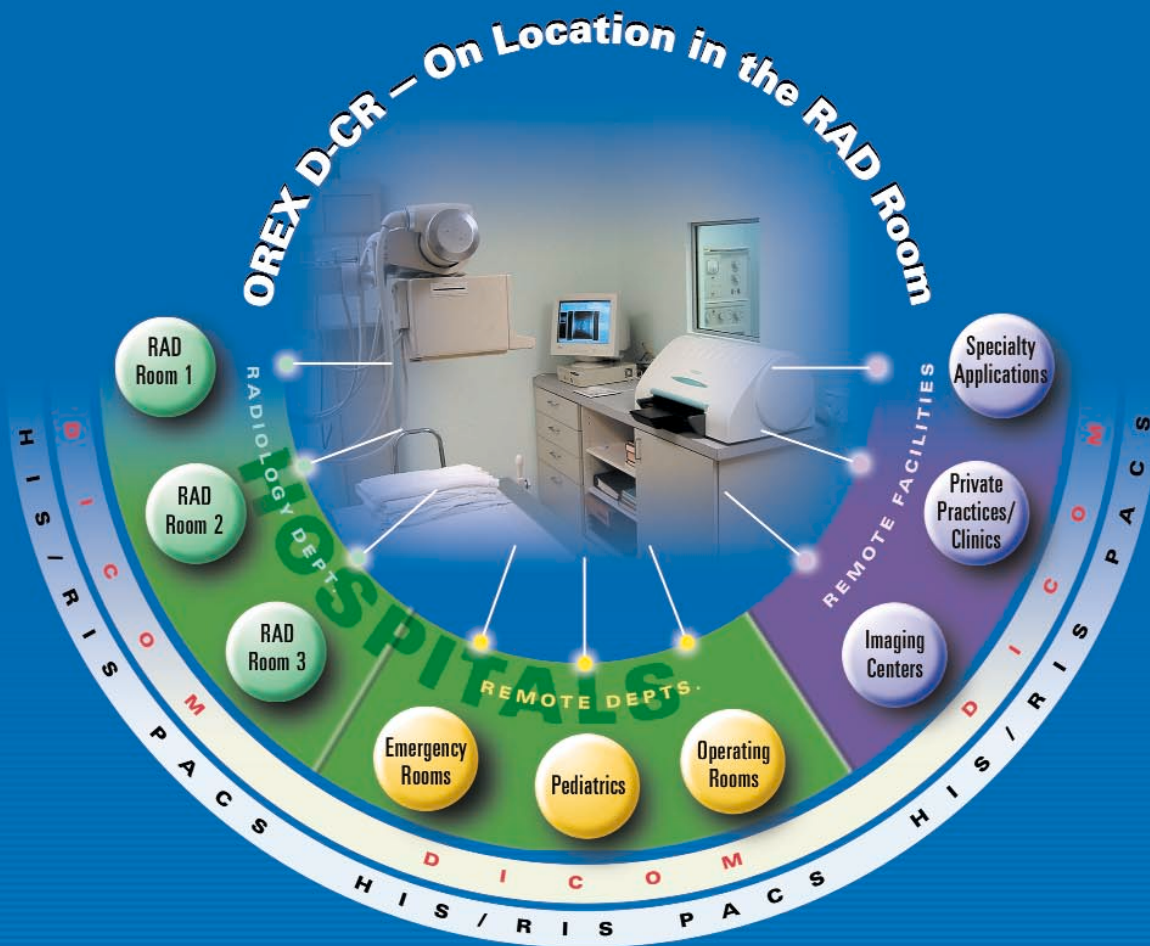
A Clinical Breakthrough in Computed Radiography



PoCR 1417



RADIOLOGY AND OTHER SPECIALTIES



Orex is the first company to successfully develop and market Distributed Computed Radiography (D-CR) solutions that deliver affordable, high image quality, compact CR readers for every RAD room. Orex D-CR solutions eliminate the expense, workflow and productivity problems associated with expensive, centralized CR systems and old-fashioned film-based processing.

The Orex D-CR solution addresses the full spectrum of clinical practices, including:

- Hospital radiology departments
- Campus-wide hospital departments
- Private imaging centers
- Private practices and clinics with x-ray equipment
- Specialists (e.g., orthopedists, chiropractors)
- Rural or mobile x-ray units
- Off-shore or highly remote medical facilities
- Other specialty practitioners: podiatrists, dentists, orthodontists
- Military installations

The Orex D-CR solution provides all of the following benefits:

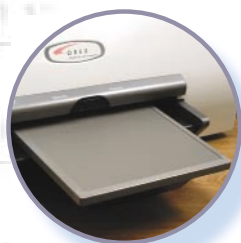
- Low cost of ownership
- Improved diagnostics
- More efficient workflow to handle more patients
- Built-in redundancy (for larger medical facilities with multiple PcCR readers)
- Easy information sharing and storage (DICOM 3.0 compatible, supporting PACS and MiniPACS)
- Multi-modality software
- HIS/RIS Modality Work List

Now
41 Plates
Per Hour!

PcCR 1417

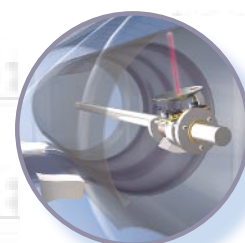
PRODUCT HIGHLIGHTS

THE OREX PcCR 1417 IS THE BUILDING BLOCK OF DISTRIBUTED CR (D-CR), THE CLINICAL BREAKTHROUGH IN COMPUTED RADIOGRAPHY THAT IS RAPIDLY BECOMING A DRIVING FORCE IN TODAY'S DIGITAL HEALTHCARE REVOLUTION. HEALTHCARE FACILITIES CAN INSTALL A PcCR IN EACH RAD ROOM AND THEN NETWORK THE DISTRIBUTED UNITS TO COMPRISE A D-CR SOLUTION. THE PATENTED TECHNOLOGY IN THE OREX PcCR 1417 READER RESULTS IN AN EXTREMELY COMPACT (I.E., TABLETOP) CR UNIT THAT PRODUCES HIGH QUALITY CLINICAL IMAGES. THESE IMAGES CAN BE MANIPULATED, DUPLICATED, PRINTED AND TRANSMITTED WITH NO LOSS OF CLINICAL INFORMATION.



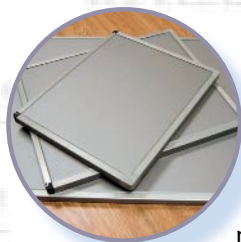
Automatic Daylight Cassette Loading

Orex's patented automatic cassette and daylight loading features improve the RT's productivity and prolongs the life of the plate by minimizing exposure to scratches, dirt, fingerprints, etc.



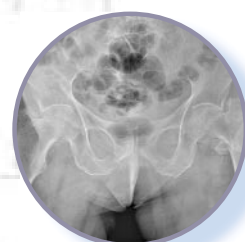
Patented Scanning System

Orex's patented PcCR rotational scanning design reduces the CR reader to tabletop size, while producing the highest quality clinical images. All points on the phosphor plate experience an identical optical path for laser reading and signal detection.



Reusable Phosphor Plates

The Orex PcCR captures the x-ray radiation on a phosphor plate that forms and stores a temporary latent image. The image is read when a laser beam inside the reader illuminates the plate. The phosphor plate is erased and can be reused almost indefinitely.



High Exposure Range and Latitude

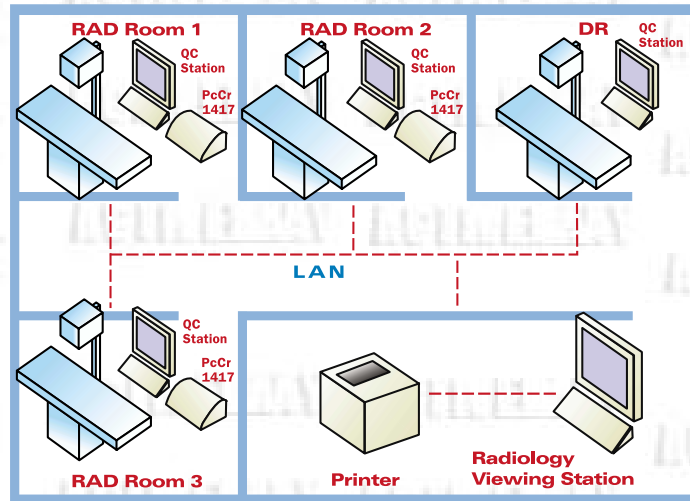
The Orex PcCR operates with a wide range of exposing x-ray energies and intensities and allows better image quality and easier diagnosis when, for example, bones and soft tissue details can be viewed in the same image.



The Orex PcCR reader's intuitive scanner interface reduces the learning curve and maximizes productivity for RTs, with easy access to all operating, calibration and self-diagnostic features.

RADIOLOGY

DISTRIBUTED CR (D-CR) RADIOLOGY DEPARTMENT



OREX D-CR PROVIDES AN AFFORDABLE, HIGH QUALITY CLINICAL IMAGE ALTERNATIVE TO EXPENSIVE, CENTRALIZED CR SYSTEMS OR OLD-FASHIONED FILM-BASED PROCESSING. OREX BRINGS HIGH QUALITY DIGITAL X-RAY — IMAGE ACQUISITION, QC AND REVIEW — RIGHT INTO THE RAD ROOM.

The throughput improvements enabled by D-CR means that radiology departments can see more patients in a day, making better use of both staff and equipment and increasing revenues and quality care. Quality control is cut to a fraction of the time as RTs don't have to travel to remotely located QC processing stations. D-CR also eliminates bottlenecks around centralized CR readers because RTs don't have to queue up and wait to process plates.

With the PcCR reader in the RAD room, the RT can scan each cassette immediately, eliminating the need for large, expensive multi-cassette CR systems. Patient information can be imported directly to the PcCR's QC station via the DICOM-compatible Modality Work List, saving the time and money associated with complex mechanical or optical systems for cassette ID marking.

Radiology departments that install multiple PcCR readers, one in each RAD room, automatically create redundancy, eliminating the need for a backup centralized CR system to prevent downtime. For hospitals that expect to acquire a DR system, D-CR makes it practical and cost-effective to create an "all-digital" environment, rather than maintaining a hybrid environment of analog and digital technologies.

Sophisticated image management software allows physicians to enhance and manipulate images, take measurements, make annotations, and more. Once the patient study is completed, the digital images can be stored locally on CD-ROMs or DVDs or transmitted over a network to a central archive facility or PACS system.

REMOTE



Remote Hospital Departments

Orthopedic departments, pediatric departments, emergency rooms, operating rooms and other special care units within the healthcare facility can't afford to waste valuable time running CR plates to and from the radiology department and waiting their turn for centralized CR processing resources. Yet few departments can afford the expense – or physical space – required to install their own CR systems, even in the interests of improving staff productivity and patient care. An Orex PcCR reader is the perfect departmental system for high quality, all-digital x-ray processing and review. This compact desktop system is designed to fit where space is at a premium.



Imaging Centers

Imaging centers are at the forefront of the digital revolution. However, traditional film-based processing of x-rays means that imaging centers must compromise their “all digital” technologies and invest in darkrooms and chemicals. The Orex D-CR solution lets imaging centers stay completely digital, so physicians can view, manipulate and enhance x-ray images on the screen just as they read MRIs and CAT scans.



Private Practices/Clinics

Orex's compact PcCR reader can sit in the RAD room or beside the x-ray generator, freeing up valuable space that today is overtaken by film-based processing and storage. It also saves clinics money in off-site overflow storage of film inventory. The DICOM-compatible digital images can be transmitted electronically over a local network to any examination room or any doctor's office in the clinic – or even over the Internet to a physician working from home.



Specialty Applications

Medical operations in inaccessible places rely heavily on remote x-ray interpretation and consultation in order to provide prompt, effective treatment for patients. Darkrooms take up valuable space, and chemicals have to be stored, discarded and refreshed periodically. The PcCR's digital images can be transmitted to remote physicians for consultations with absolutely no loss of image quality. And all-digital technology means no film or chemicals and easy image storage where space is severely limited.

PcCR 1417 / 812

SPECIFICATIONS

	PcCR 1417 AUTO CASSETTE LOADING	PcCR 812 MANUAL LOADING
IMAGING PLATE SIZE	14" x 17" 10" x 12" 8" x 10"	8" x 12" (200mm x 300mm) 8" x 10" 5" x 12" 150mm x 300mm 180mm x 240mm
PROCESSING CAPACITY	41 plates / hr	12 plates / hr
SCANNING TIME	54 sec (for 41 plates / hr) 130 sec (for 20 plates / hr)	210 sec
SPATIAL RESOLUTION	6 pixel / mm (for 14" x 17") 8 pixel / mm (for 10" x 12") 10 pixel / mm (for 8" x 10")	10 pixel / mm (for 8" x 12") 10 pixel / mm (for 8" x 10") 20 pixel / mm (optional)
GRAYSCALE RESOLUTION	12 bits / pixel	12 bits / pixel
INTEGRATED AUTOMATIC ERASURE	Standard	N/A
DIMENSIONS WITH CASSETTE (WxDxH)	780 x 640 x 340 mm (31" x 25" x 13.5")	480 x 320 x 220 mm (19" x 12.5" x 8.5")
WEIGHT	40 kg (88 lbs.)	15.5 kg (34 lbs.)
POWER SUPPLY	Single phase 50-60 Hz, 200 VA 100 AVC – 240 AVC (± 10%) UPS required	Single phase 50-60 Hz, 80 VA 100 AVC – 240 AVC (± 10%) UPS required
REGULATORY APPROVALS	FDA - K003256 CE SDA - 20022310684 Health Canada - 31698	FDA - K003256 CE
SAFETY STANDARDS	EN 60950, 60825-1: 1994, 60601-1-2	EN 60950, 60825-1: 1994, 60601-1-2
MINIMUM WORKSTATION REQUIREMENTS	Pentium IV 1.8 GHz or higher, with min 512 Mb memory, USB port (Intel chipset)	Pentium III 500 MHz or higher, with 128 Mb memory, USB port (Intel chipset)
PATENT NO	US 6,291,831-B1. Other patents pending	US 6,207,968,B1. Other patents pending
SOFTWARE	OREX Acquisition SW: Full control over scanner parameters and settings, anatomic programming, remote access, simple integration with PACS. Full DICOM conformity.	

Orex holds two U.S. patents (US 6,291,831-B1 and US 6,207,968-B1), covering the company's rotational scanning CR technology. The patented rotational scanning system makes it possible to shrink the size of the CR scanners to the compact (i.e., tabletop) size and, at the same time, produce the best raw data images possible. The patented small size readers eliminate the need for technicians to walk to centrally located QC/reviewing stations. These combined breakthroughs have enabled Orex to pioneer the patent-pending concept of Distributed CR (D-CR) and the patent pending concept of redundant system arrays.



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