

The Versatile and Powerful **ACLxy™**

Everything You Imagined CR To Be

**ACLxy**

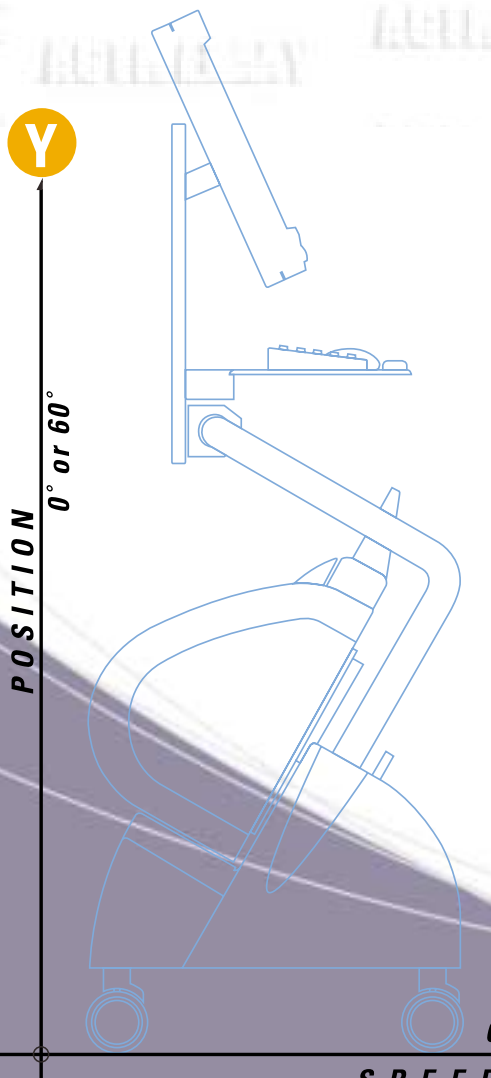


**OREX**  
Distributed Computed Radiography

# ROLLING into a Clinic, Imaging Center and Hospital Near You!

COMPUTED RADIOGRAPHY (CR) IS RAPIDLY BECOMING A DRIVING FORCE IN TODAY'S DIGITAL HEALTHCARE REVOLUTION. THE OREX CR SOLUTION REPLACES MESSY, SPACE-CONSUMING, HARD-TO-STORE, COSTLY FILM WITH DIGITAL X-RAY PROCESSING. BUT THAT'S

JUST THE BEGINNING. THE OREX CR SOLUTION DRAMATICALLY IMPROVES ON TRADITIONAL CENTRALIZED CR SYSTEMS BY DELIVERING HIGH-QUALITY, LOW-COST, COMPACT AND EXTREMELY MOBILE CR ANYWHERE IT'S NEEDED. IT'S A CLEARLY REMARKABLE BREAKTHROUGH IN CR.



## HOW IT WORKS

The Orex ACLxy combines laser scanner, erasable phosphor plates, advanced image management software and a PC-based review station in one compact, affordable system. These CR scanners can be used in virtually any clinical application or location, and multiple scanners can be networked together over a conventional local area network (LAN) to create a Distributed CR (D-CR) solution. The ACLxy-generated images can be exported in a DICOM 3.0 compatible format.

## WHAT YOU SEE

All of the imaging parameters are optimized to achieve image quality equal to or better than film. Unlike film, however, the Orex digital images can be enhanced, enlarged, duplicated, and sent to any location in seconds with no loss of resolution.

## WHERE IT'S USED

- Hospital radiology departments
- Campus-wide medical centers
- Private imaging centers
- Private practices and clinics with x-ray equipment
- Specialists (e.g., orthopedists, chiropractors, podiatrists)
- Off-shore, rural, mobile or highly remote medical facilities
- Military installations
- Military front line deployment
- Emergency and disaster areas

The image shows a mobile medical imaging workstation. It consists of a light-colored base unit with a black keyboard tray and a monitor on top. The monitor displays a chest X-ray. The base unit has a logo that says 'ACL' and 'OREX'. The entire unit is mounted on a metal cart with four wheels and a handle. The background is a light purple gradient with white curved lines.

*OREX System  
mounted on a Z-Cart*

**75 Cassettes / Hour**

**Compact Footprint**

**Lightweight**

**Mobile**

#### **PLUG AND SCAN**

Mounted on a Z-Cart or placed on a table-top, the Orex ACLxy provides unprecedented flexibility for any healthcare environment where space efficiency and costs must be optimized. It is highly mobile and can be placed anywhere. From ER to OR to trauma rooms, the ACLxy can be rolled into any situation where nearly instant digital images are needed. Just plug it in and scan!

#### **Z - CART**

Integrated as a complete imaging solution, the Z-Cart contains CR scanner, QC workstation, monitor (high-resolution or optional very-high resolution), barcode reader, and cassette holder. The compact footprint allows the Z-Cart to be placed anywhere, in the RAD-room or following the mobile x-ray. The Z-Cart is where the action is!

#### **IMPROVED PRODUCTIVITY**

The ACLxy operates at a speed of up to 75 cassettes an hour on a single scanner (complete cycle time to second cassette, for any cassette size), and speeds of up to 150 cassettes per hour on the dual RAIS2 scanner.

#### **IMPROVED PERFORMANCE**

- Normal and high-resolution modes: 5.8 to 20 pixels/mm
- Standard and low dose settings: speed equivalent to 100, 200 and 400 ASA film
- Selectable Acquisition Pixel Matrix: 2,000 x 2,500 and optional 4,000 x 5,000 pixels

# Clinical Applications

## GENERAL RADIOLOGY

The Orex ACLxy is configurable to meet most clinical applications. With its anatomical interface you can set the system to produce extremely high quality images of any body part. You can import patient demographics directly from your RIS/HIS applications via a DICOM Modality Work List. Once the patient study is completed, the DICOM-compatible images can be transmitted over a network to a central PACS for review and storage, or archived locally on CD-ROMs or DVDs.

## ORTHOPEDICS

Orthopedic suites can use the Orex ACLxy for image analysis, interpretation and "true-size" measurements. Long-bone studies can be performed using specially designed 14" x 34" and 14" x 51" cassettes. Stitching software enables composition of long images. The osteoporosis screening option, developed in partnership with CompuMed, Inc., uses the Orex PcCR® to scan images of the patient's fingers as the source for reports.

## IMAGING CENTERS

With its full set of features and high performance, the Orex ACLxy is right at home in an imaging center. Physicians can view, manipulate and enhance x-ray images on the screen. Images can be exported in a DICOM 3.0-compatible format for easy archiving onsite, review from any workstation or electronic transmission to referring physicians for consultations.

## RADIOTHERAPY

The Orex ACLrt, utilizing special cassettes, captures kilo- and mega-voltage radiation on a reusable phosphor plate. The DICOM-compatible RTPro software lets you review digital images side-by-side, add annotations and approve/disapprove portal scans.

## MILITARY

The field-proven Orex PcCR scanner is ideal for remote or inaccessible places. The Orex PcCR solution eliminates the need for film and messy processing. The Orex PcCR is light, easily portable, uses a minimal of space and enables superior manipulation of images for interpretation in the most demanding conditions.

**OREX CR Scanner** IN THE MILITARY

- Quality • Simplicity • Proven Field Use • Reliability • Serviceability • Dependability

*From the field in Iraq:*  
There are no chemicals or film to handle, order or store. The unit is also much lighter, uses less space and is easier to set up than the Agfa system. Manipulation of the image is also key to better management of resources and time.

Unit is 400 pounds (180kg) without film. 60 lbs (27kg) with film.

**MIL-STD-810E**

87°C	48 hour storage
40°C / 25°C	2 hour operation / 60% humidity 24 hours
32°C	2 hour operation
-15°C	48 hour storage

The advertisement features a central graphic of a temperature scale on the left, ranging from -15°C to 87°C. The background is a collage of military scenes: an aircraft carrier at sea, a fighter jet in flight, a helicopter, and a tank. The overall design is vibrant with yellow and blue tones.



# The Versatile and Powerful ACLxy

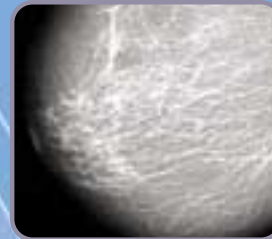
The ACLxy serves as the platform to address a wide variety of clinical applications and price points. Speed, resolution and application software can easily be upgraded via a programmable key. The system can adapt and grow by adding new features and accessories to the same general purpose scanner. You pay only for the options you need.



General purpose system offers a full range of resolution and speeds



Mammography system designed for very high resolution breast imaging on special cassettes



Designed for very high resolution lung and chest imaging



Specifically designed for Radiation Therapy using specialized software and cassettes



## Medical Product Matrix

	ACL4	ACLxy		ACLrt	ACLMax	
	General Radiology	General Radiology	Orthopedics		Radiation Therapy	Mammography*
			LONG BONE	BONE MASS DENSITOMETRY		
Processing Capacity	40 Plates / Hr.	75 or 60 Plates / Hr.	75 or 60 Plates / Hr.	75 or 60 Plates / Hr.	75 or 60 Plates / Hr.	75 or 60 Plates / Hr.†
Pixel Pitch	86µ-173µ	86µ-173µ	86µ-173µ	86µ-173µ	86µ-173µ	50µ-173µ
Low Dose Enhanced Scan	✓	✓	✓	✓	✗	✓
Accept All Standard Cassettes	✓	✓	✓	✓	✓	✓
Configuration	Cart or Tabletop	Cart or Tabletop	Cart or Tabletop	Cart or Tabletop	Tabletop	Cart or Tabletop
SPECIALTY APPLICATION PACKAGES						
Software	<ul style="list-style-type: none"> <li>• OR-Stitch</li> <li>• Osteogram®</li> </ul>	✗	<ul style="list-style-type: none"> <li>• OR-Stitch</li> </ul>	<ul style="list-style-type: none"> <li>• Osteogram®</li> </ul>	<ul style="list-style-type: none"> <li>• RT-Pro</li> </ul>	<ul style="list-style-type: none"> <li>• OR-Max</li> </ul>
Cassettes	<ul style="list-style-type: none"> <li>• Long Bone 14" x 34"</li> <li>• 14" x 51"</li> </ul> Bone Densitometry • 8" x 10"	✗	<ul style="list-style-type: none"> <li>• Long Bone 14" x 34"</li> <li>• 14" x 51"</li> </ul>	<ul style="list-style-type: none"> <li>• Bone Densitometry 8" x 10"</li> </ul>	<ul style="list-style-type: none"> <li>• Portal 14" x 17" for MV use</li> </ul>	<ul style="list-style-type: none"> <li>• Borderless Mammography 18cm x 24cm</li> <li>• 24cm x 30cm</li> </ul>

\*Not for sale in the USA. †Slower for Ultra High Resolution (50µ) scans.

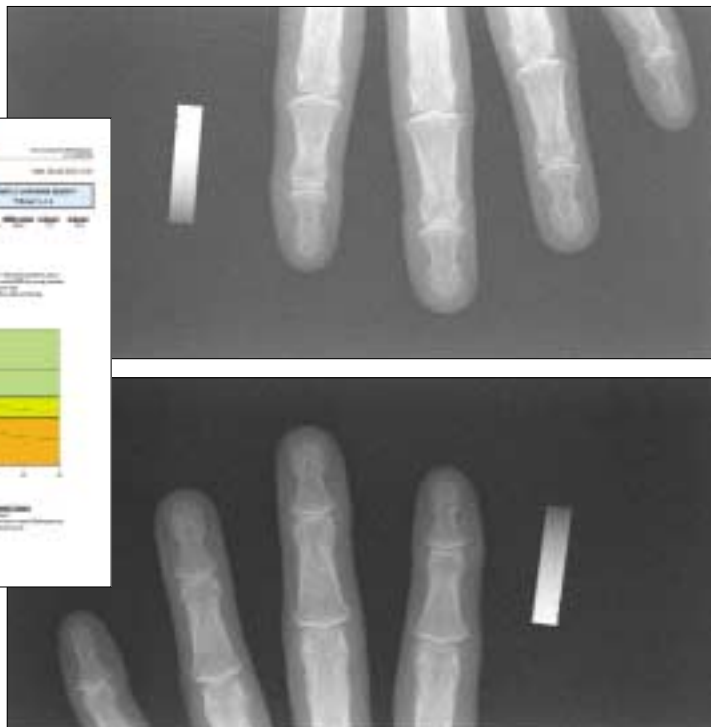
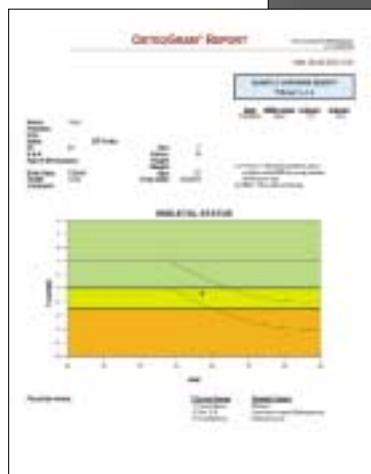
# Computer Aided Detection and Diagnostic Tools

## BONE DENSITOMETRY

The bone densitometry configuration, developed in partnership with CompuMed, Inc., is used in osteoporosis screening. Images of the patient's fingers are scanned using the ACLxy as the input source for reports. Specially designed cassettes provide fast and simple bone density measurements.

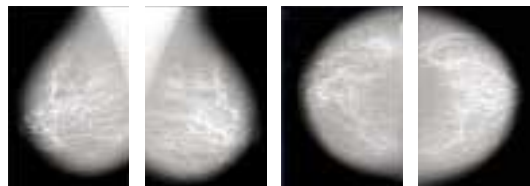
## LUNG\*

The lung configuration enables analysis of high-resolution chest scans for improved detection of chest lesions.



## MAMMOGRAPHY\*

The mammography configuration scans images at 50  $\mu$ m reading resolution, using special borderless cassettes for enhanced image quality. Cassette sizes available are 18cm x 24cm and 24cm x 30cm. The system can be coupled to a Computer Aided Detection (CAD) software module for assisted detection of masses and micro calcifications.



# Distributed CR (D-CR) From Orex is Everything — and Everywhere — You Ever Imagined



## PRODUCTIVITY

By placing compact, low-cost scanners right in the radiology exam room, other hospital departments, clinics, etc., Orex enables more productive image acquisition, review and quality control. Workflow is streamlined because technicians don't have to travel to remotely located QC stations and queue up and wait to process plates. The Orex scanners can be networked via a local area network (LAN) to import information from patient information systems or export images to remote workstations or central PACS for review and storage.

## MOBILITY

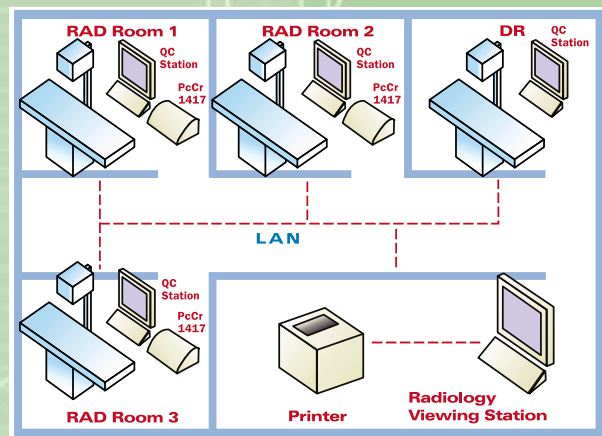
The Orex D-CR solution is not only distributed, it is easily distributable — the mobile cart solution makes it even easier to move a scanner anywhere in the hospital or clinic, plug it in and start scanning. The mobile cart is also the perfect companion for mobile x-ray equipment.

## SCALABILITY

A centralized CR system has a fixed processing capacity that limits the overall throughput of busy departments and clinics. With a D-CR solution, hospitals can match the number of scanners to the number of RAD rooms, making it a highly scalable solution.

## REDUNDANCY

With numerous CR scanners throughout the enterprise, D-CR creates redundancy at a much lower cost than buying a backup centralized CR system (or provides a low-cost backup solution to an existing centralized CR system).



*Distributed CR (D-CR) Solutions for Radiology Departments*

# OREX ACLxy™

## SPECIFICATIONS

	PcCR® ACLxy AUTO CASSETTE LOADING
PROCESSING SPEED (THROUGHPUT, ERASE INCLUDED)	75 PLATES/HR. (48 SECONDS/PLATE), 60 PLATES/HR. (60 SECONDS/PLATE)
GRAYSCALE RESOLUTION	16 BITS/PIXEL IMAGE ACQUISITION, 12 BITS/PIXEL IMAGE DISPLAY
INTEGRATED AUTOMATIC ERASURE	STANDARD
DIMENSIONS (W x D x H)	733 x 655 x 340 MM (39" x 26" x 14")
WEIGHT	40 KG. (88 LBS.)
SYSTEM CONFIGURATIONS	TABLE TOP (STATIONARY), Z-CART (MOBILE), DUAL REDUNDANT ARRAY (RAIS2), OR DISTRIBUTED D-CR
COMPUTER WORKSTATION MINIMUM REQUIREMENTS	PENTIUM IV 2.0 GHZ OR HIGHER, 1 GB MEMORY, USB II PORT, WINDOWS 2000 OR XP PROFESSIONAL OS
SOFTWARE	OR-ACQUIRE IMAGE ACQUISITION SW: FULL CONTROL OVER SCANNER PARAMETERS AND SETTINGS, ANATOMIC PROGRAMMING, REMOTE DIAGNOSTICS, DICOM 3.0 CONFORMITY, FULL DICOM TOOL SUITE FOR SIMPLE INTEGRATION WITH PACS AND MODALITY WORK LIST
POWER REQUIREMENTS	SINGLE PHASE 50-60 Hz, 200 VA, 100 AVC – 240 AVC (±10%), UPS REQUIRED
REGULATORY APPROVALS	FDA – K003256, K032654, CE, SDA – 20022310684, HEALTH CANADA – 31698
SAFETY STANDARDS	EN 60601-1, 60825-1, 60601-1-2
OPTIONS	Z-CART: FOR INTEGRATED MOBILE IMAGE ACQUISITION SOLUTION BARCODE READER: FOR CASSETTE IDENTIFICATION AND INTEGRATION WITH MODALITY WORK LIST LONG BONE PACKAGE: INCLUDES OR-STITCH SOFTWARE AND LONG BONE CASSETTE BONE DENSITOMETRY PACKAGE: INCLUDES OSTEOGRAM® SOFTWARE AND 8" x 10" CASSETTE WITH TEMPLATE MAMMOGRAPHY PACKAGE: INCLUDES OR-MAX SOFTWARE AND BORDERLESS CASSETTES 24/7 ONLINE WORLDWIDE SUPPORT

Cassette Size	8" x 10"	10" x 12"	14" x 14"	14" x 17"	14" x 34"	14" x 51"	18cm x 24cm	24cm x 30cm	35cm x 43cm
( U H R ) U L T R A - H I G H R E S O L U T I O N									
Pixel Matrix	4064 x 5080	4097 x 4916	4157 x 4157	4135 x 5021	2055 x 4874	2067 x 7253	3600 x 4800	4000 x 5000	4135 x 5021
Sampling Density	20.0 pix/mm	16.1 pix/mm	11.6 pix/mm	11.6 pix/mm	5.8 pix/mm	5.8 pix/mm	20.0 pix/mm	20.0 pix/mm	11.6 pix/mm
( H R ) H I G H R E S O L U T I O N									
Pixel Matrix	2032 x 2540	2016 x 2419	2072 x 2072	2055 x 2496	Not Available	Not Available	2093 x 2790	2326 x 3488	2055 x 2496
Sampling Density	10.0 pix/mm	7.8 pix/mm	5.8 pix/mm	5.8 pix/mm			11.6 pix/mm	11.6 pix/mm	5.8 pix/mm



**Orex Computed Radiography Inc.**  
 2000 Commonwealth Ave, Suite 200  
 Auburndale, MA 02466  
 Toll free: 888 844 7775  
 Tel: 617 244 9000  
 Fax: 617 244 9020  
 salesusa@orex-cr.com

**Orex Computed Radiography Ltd.**  
 Star Yokneam Bldg., P.O. 505  
 Yokneam 20692, Israel  
 Tel: +972 4 959 1331  
 Fax: +972 4 959 1262  
 sales@orex-cr.com

**World Wide Web: [www.orex-cr.com](http://www.orex-cr.com)**