

# DXS 4000 PRO

## UNMATCHED RESOLUTION IN DIGITAL SPECIMEN RADIOGRAPHY.

Digital X-ray Specimen 4000 PRO Systems deliver greater than 25 line pairs per millimeter without geometric magnification, providing the best digital resolution available in cabinet X-ray systems and flexible 10X zoom capabilities.

- Powerful cooled 4 megapixel scientific grade CCD camera combined with proprietary phosphor screen technology and automated 10X zoom lens yields exceptionally precise and accurate X-ray images
- Robustly designed self-contained cabinet for radiography exceeds requirements for Federal Regulation 21 CFR 1020.40 radiation safety.
- Precise and accurate X-ray quantification using true 16-bit imaging and unique, fully energy calibrated X-ray imaging cabinet
- Integrated analysis software enables quantification, annotation and databasing of radiography images.
- Fully compatible with the use of traditional film
- Unique upgrade path to molecular imaging capabilities, including multi-wavelength fluorescence, radioisotopic, and luminescence imaging, protects your investment.



## Capture exceptional X-ray images for your research with the DXS 4000 PRO.

### See the details.

Industry-leading resolution of  $\geq 25$  lp/mm contact

### Adjust your FOV as needed.

10x continual zoom (2 cm to 20 cm) and optional geometric magnification

### Quantify accurately.

16-bit digital camera, fully energy calibrated X-ray, optional bone density software

### Grow your research.

Unique upgrade path to fluorescent, radioisotopic and luminescent molecular imaging — all in a single system.

**Learn more.** Call **1-877-747-4357**, exp. code 7.  
Outside the U.S. call **+1-203-786-5658**. Or visit us online at

 [mi.carestreamhealth.com](http://mi.carestreamhealth.com)

**Carestream**  
Molecular Imaging

 **one source**  
for all your molecular imaging needs



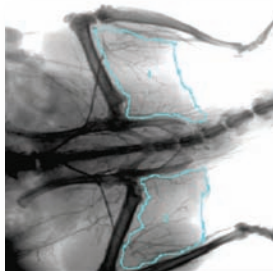
High resolution digital X-ray of rat paws



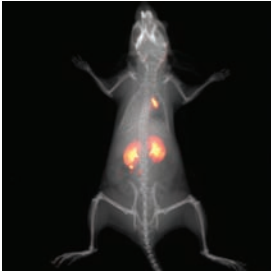
Mouse GI track highlighted using barium sulfate contrast agent



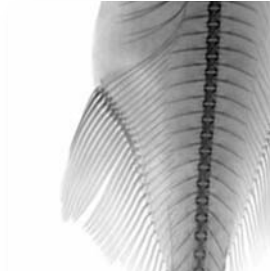
X-ray of a mouse skull. Geometric magnification stage utilized.



Contrast and measurement of vasculature in a mouse with radio-opaque barium sulfate



Mouse imaged with contrast agent. Areas of contrast pseudo-colored & overlaid on X-ray



Digital X-ray of an African mormyid Courtesy of: Dr. P. Moller, Hunter College

### Ideal Applications Include:

Pre-clinical small animal research

- Oncology
- Dental research
- Developmental biology
- Orthopaedics
- Pulmonary research
- Bone injury and repair
- Osteoarthritis

Plant and agricultural research

Forestry

Marine biology

Specimen radiography

Veterinary practice

- Small animal medicine
- Laboratory animal medicine

### Optional Accessories:

- Geometric magnification stage
- Automated animal heater
- Network license
- Bone Density software

### Find out more.

For more information, to request pricing, an in-lab demo, or to place an order, call **1-877-747-4357**, express code 7. Outside the U.S. **+1-203-786-5658**.

[mi.carestreamhealth.com](http://mi.carestreamhealth.com)

**Carestream**  
Molecular Imaging

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While Carestream Molecular Imaging products can be used for in vivo and in vitro molecular imaging of materials, researchers should be aware that the methods of preparing and viewing the materials for molecular imaging may be subject to various patent rights.

All images were captured using Carestream Molecular Imaging systems.

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## SPECIFICATIONS

### Performance

|                         |   |
|-------------------------|---|
| Resolution              | ≥ 25 lp/mm contact (without geometric magnification)    |
| Field of View           | 2 cm x 2 cm to 20 cm x 20 cm                            |
| Data Acquisition        | 16-bit single capture (>65,000 of grayscale resolution) |
| Geometric Magnification | Additional 3.35X magnification (optional)               |

### X-Ray Source

|                      |                      |
|----------------------|----------------------|
| Energy Range         | 12-35 kVP            |
| Maximum Current      | 150 uA               |
| Spot Size            | <50 microns, nominal |
| Target Material      | Tungsten             |
| Window Filtration    | Beryllium            |
| Cone of Illumination | >33 degrees          |

### Digital Camera

|                |                                      |
|----------------|--------------------------------------|
| CCD            | 2048 x 2048 pixel CCD                |
| Dark Current   | 5 x 10 <sup>-5</sup> e/s/pixel       |
| Cooling        | -29°C absolute                       |
| Lens           | Automated 10X optical zoom           |
| Exposure Modes | Single, Multiple and Timelapse Modes |
| Interface      | Ethernet                             |

### Cabinet

|                    |   |
|--------------------|---|
| Filtering          | The system includes hardening filters to enhance contrast.<br>DXS 4000 Pro: Automated 0.1 mm, 0.2 mm, 0.4 mm, and 0.8 mm. |
| Safety             | Complies with Federal Regulation, 21 CFR 1020.40 radiation safety   |
| Power Requirements | 100 - 230 VAC / 50-60 Hz 7A   |
| Dimensions         | 18.5" (L) x 24.8" (W) x 38.0" (H) (not including computer)  |
| Weight             | Approximately 230lbs  |
| Upgrade Option     | Fluorescent, luminescent, reflectance and radioisotopic imaging modalities  |

### Computer & Software

|                   |  |
|-------------------|--|
| Computer          | PC and monitor supplied standard   |
| Software Tools    | Region of interest X-ray density measurement - automated and manual methods<br>Comprehensive image display tools, including brightness contrast, gamma adjustment, rotation, cropping.<br>Annotations mode to prepare image for publication<br>Databasing provides storage and retrieval tools to manage images<br>Export analysis and images in various formats including DICOM |
| Operating Systems | Windows XP   |