

Fidex: CT, DR, and fluoroscopy in one machine



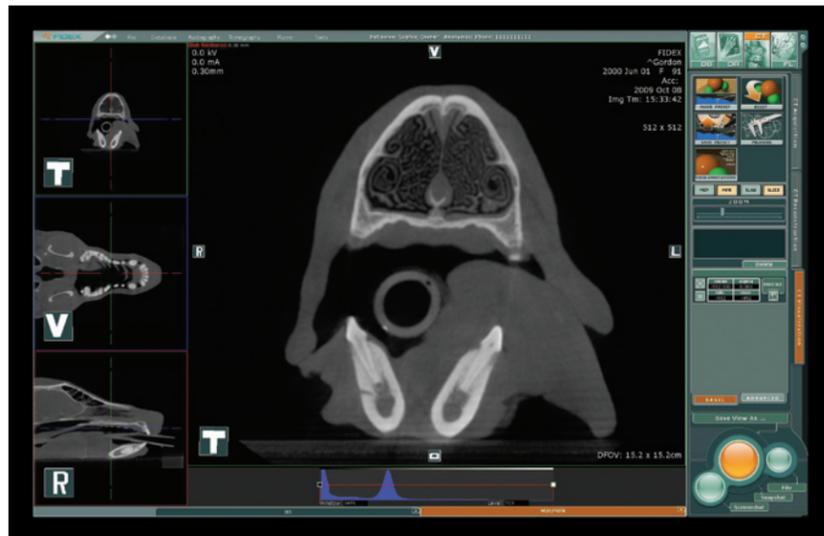
Animage, LLC, has created a new three-modality diagnostic imaging system, **Fidex**, for companion animal veterinary practice and research laboratories. Fidex combines into a single machine: computed tomography (CT), digital radiography (DR), and fluoroscopy. Fidex can also be configured as a one-, or two-modality system. Fidex's combination of these modalities into one machine conserves valuable space and financial resources, as well as energy and other operational expenses, thus making the clinical and economic advantages of in-house CT capability vastly more achievable.



Fidex

The combination of CT, radiography, and fluoroscopy in one machine creates unprecedented economies of space, energy, and financial resources. Because of this, Fidex can put the benefits of the diagnostic power of CT at the service of many more veterinarians, their patients, and the people who love their patients.

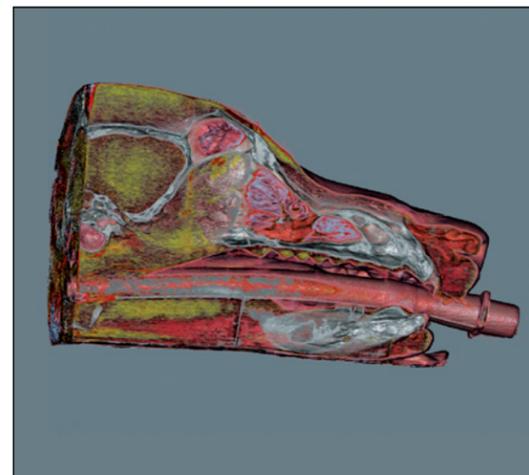
Even as just a CT scanner, Fidex offers a brand new CT system that is smaller, requires much less power and room modification, is easier to operate and maintain, and costs less to operate and maintain than a refurbished, used human CT scanner. Fidex runs from a standard 120 V wall outlet (optionally 240 V), requires no cooling beyond standard office temperature controls, has similar shielding parameters to standard radiography systems, and can go right through standard doors and hallways and be installed in as little as an hour—ready to run in two hours.



CT nasal study (above, MPR view; right, volume rendering) of a Husky with a severe nosebleed—ruled-out tumor as cause. Also shown, Fidex's clearly-marked, easy-to-use controls.

Fidex Benefits

- Makes CT and fluoroscopy more accessible—both to veterinary practices and their clients
- Enhanced diagnostic accuracy and value
- Flexibility of imaging modality selection: One, two, or three modalities; push-button switching
- Improved cash flow from advanced imaging—both in-house and from referrals from outside
- Less reliance on outside advanced imaging resources
- C-arm rotation gives the ability to acquire certain oblique and lateral radiographic studies without moving the patient; as well as weight-bearing, standing radiographic studies.

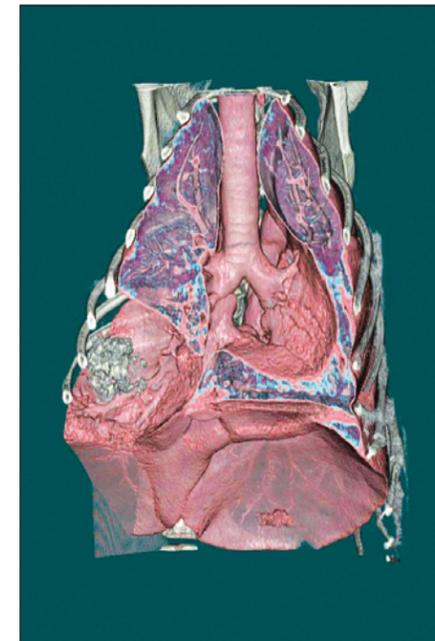


Simple Operation

Fidex's user interface and operating software make it easy to operate. Pre-set technique factors enable even a first-time user to make high-quality CT images within moments of installation (one can also directly control each technique factor). Once Fidex is plugged into your standard 120 V wall outlet and the calibration cycle runs, it's ready to use.

DICOM Compliant

Fidex supports the export of DICOM-compliant images and is compatible with radiology workstations, enabling quick consultation with teleradiology service.



CT volume rendering showing displacement of a dog's right (viewer's left) lung by a large tumor, as well as calcification within the tumor, selectively omitting display of tumor tissue.

Fidex Technology

Fidex's CT system incorporates not only standard MPR and MIP slice and slab visualization, but also the latest-available volume rendering capacity for 3D visualization. Images can be displayed in any 2D or 3D visualization that the veterinarian requires. These visualization modes offer powerful ways to facilitate diagnosis, as well as means to facilitate the accurate mapping and planning of surgical procedures.

Fidex CT images are acquired by means of cone-beam CT technology with circular C-arm scanning, using a dynamic flat panel DR detector. This is similar to systems used in human oral surgical practice, rather than the more well-known fan-beam/spiral scan technology seen in legacy CT systems. Cone-beam CT acquires volumes rather than flat slices as acquired in fan-beam CT. Patient table movement is synchronized through the scan by computer.

The dynamic flat panel detector and C-arm that acquire the CT data also acquire fluoroscopic and small DR images. A 14" x 17" flat panel detector



Standing / weight-bearing 14" x 17" DR of a healthy Yorkshire terrier, taken via the Fidex C-arm's capability to shoot from any angle.

is used to acquire full-size DR images. Alternately, a 14" x 17" CR detector can be substituted for the full-size radiography function.

Fidex's state-of-the-art image quality resolves detail below 100 microns in 2D (radiography, fluoroscopy), and 200 microns in 3D (CT).

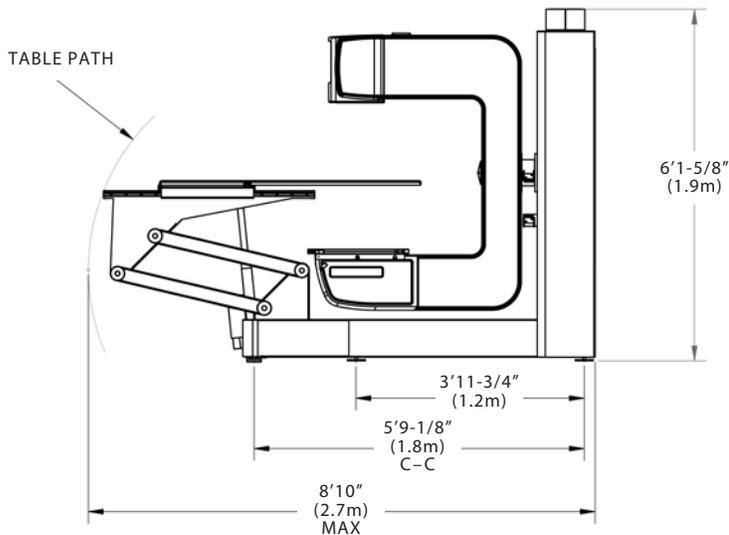
Fidex uses hardware and software developed specifically for Fidex—technology previously developed by the parent company, Exxim Computing Corporation; and special components from some of the best developers and manufacturers in their respective industries.

Fidex offers the means to make vastly more practical adding advanced diagnostic imaging capabilities to companion animal veterinary practices while creating opportunities for new revenue. To learn more about Fidex and the advantages it offers, please direct inquiries to Animage, LLC at 3825 Hopyard Road, Suite 220, Pleasanton, CA 94588, or to **925.416.1900**, or email to mvhaz@animage-llc.com.

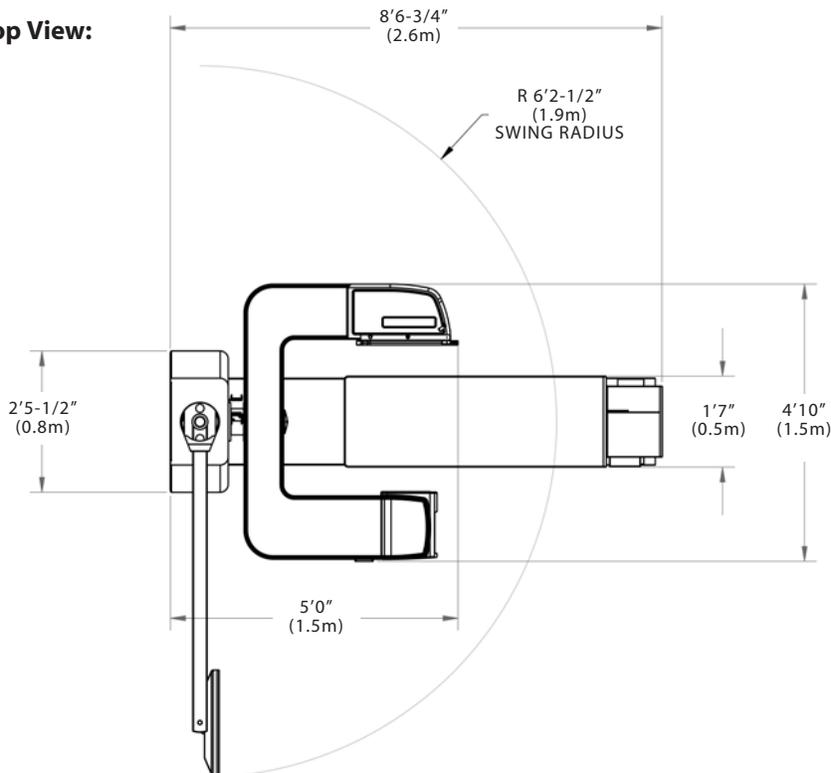


CT volume rendering of a Dachshund with hind leg paralysis, showing size and shape of intervertebral calcifications impinging into the spinal canal.

Fidex Side View:



Fidex Top View:



Fidex Specifications and Dimensions

Scan modes:

- Cone-Beam CT (volume CT); captures 512 slices in a single revolution
- Digital radiography at any radial angle
- High-quality fluoroscopy: 5 to 60 frames per second, real-time display up to 30 frames per second

Hardware

- X-ray source: 60–125 kVp, up to 8 kW; rotating anode with 80 kJ heat storage, 0.6 and 0.3 mm focus
- CT / DX / fluoro detector: 1024 x 1024 pixels of .127 mm pitch
- DR detector: 14" x 17", Varian Paxscan 4336R with 0.139 mm pixel size, GOS scintillator
- Patient table motorized up / down, in / out; C-arm gantry with motorized angulations
- Optional add-on workstation for report generation and review

Software

- Operating system: Windows
- Other software: Image generation / storage, fluoro, visualization
- DICOM-3 compliant throughout
- Real-time fluoroscopy with gantry-mounted display
- COBRA ultra-fast cone-beam image reconstruction by Exxim Computing Corporation
- Volume CT image reconstruction using Exxim's market-leading algorithms
- Animage proprietary GUI for data base, scan control, evaluation, storage and export
- Image visualization of slices — orthogonal or oblique planes, slabs, MPR, MIP
- Integrated volume rendering
- Power Source / Power Consumption / Voltage: Runs off standard 15 Amp, 120 V / 60 Hz outlet. Optionally 240 V: 50 Hz–60 Hz input. Computer system powered separately (120 V or 240 V). Average power consumption < 250 W



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Corporate

Animage, LLC (www.animage-llc.com), founded in 2008 to bring advanced imaging products into the veterinary market, is a subsidiary of Exxim Computing Corporation (www.exxim-cc.com) of Pleasanton, CA. Exxim is a specialist in 3-dimensional imaging, with products for tomographic image reconstruction and 3-D visualization for medical and NDT applications. Exxim is privately held.