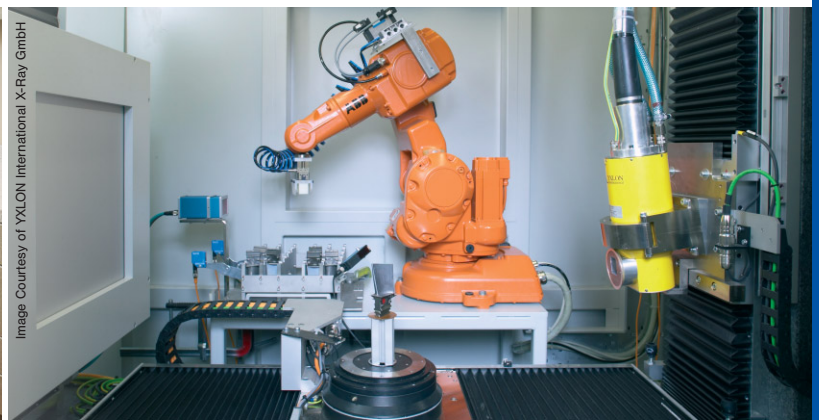
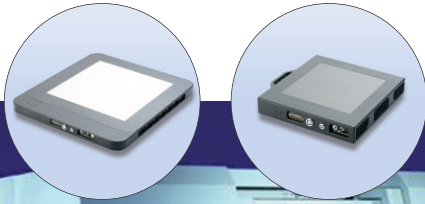


Digital X-Ray Detectors

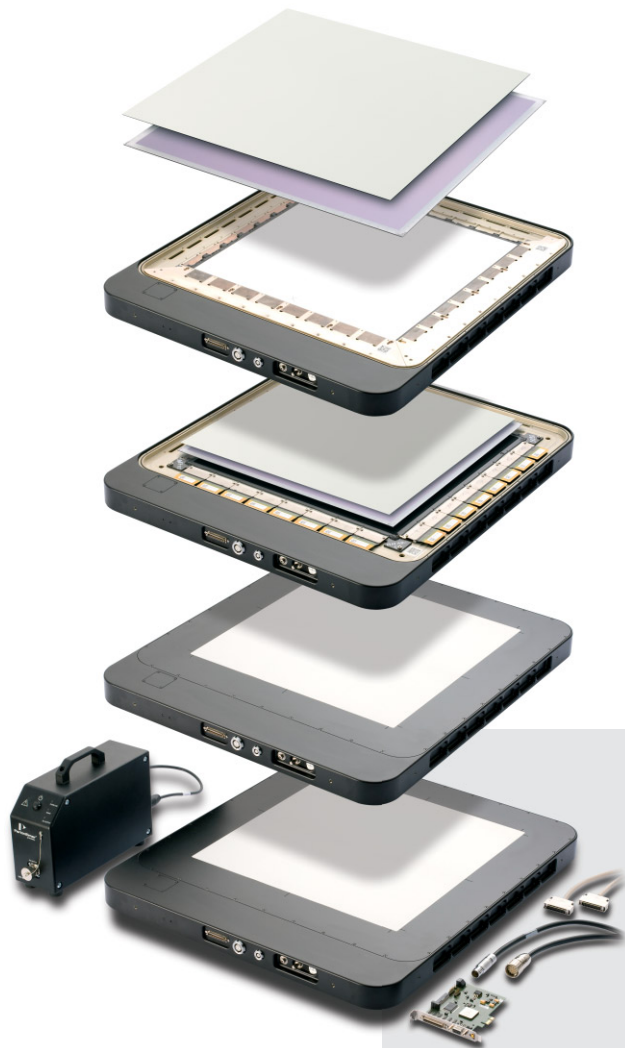
by PerkinElmer



Together, we can create
a safer and healthier tomorrow.

a-Si Digital X-Ray Detectors

by PerkinElmer



PerkinElmer's state-of-the-art digital X-Ray detectors excel across a broad range of X-Ray energies and environments – from 24x7 manufacturing inspection environments to oncology treatment to diagnostic medical applications.

PerkinElmer is a leading supplier of amorphous silicon (a-Si) digital X-Ray detectors, an enabling technology used in:

- **Industrial Non-Destructive Testing (NDT)** – from printed circuit boards to large metal castings to pipeline inspection.
- **Medical Applications** – from radiotherapy to diagnostic radiography, fluoroscopy, veterinary and panoramic dental imaging.

We manufacture our a-Si flat panel detectors in two state-of-the-art fabrication facilities, our expanded fab in Santa Clara, CA, USA and our Wiesbaden, Germany facility. PerkinElmer has manufactured and delivered more than 15,000 a-Si detectors for a range of challenging applications. You can benefit from our extensive experience with high-performance digital X-Ray technology and our large installed base.

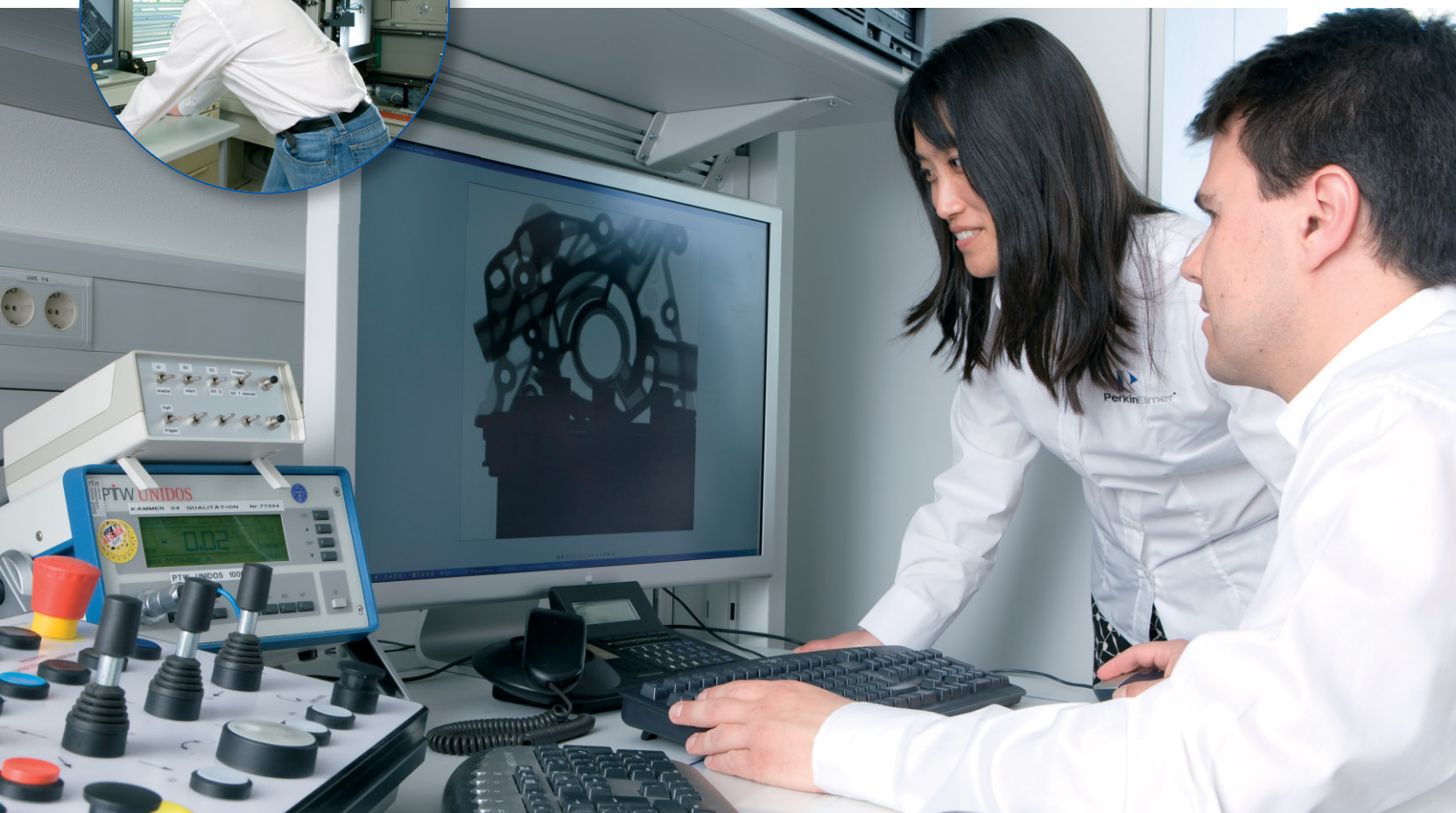
Advantages

- **Highest available bit-depth for maximum contrast resolution.**
- **Dynamic range greater than 80 dB yields superior image quality.**
- **High speed imaging for sharp images and fast throughput.**
- **Easy information storage and retrieval.**
- **Optimized pixel size to achieve proper balance of high DQE (Detective Quantum Efficiency), contrast range, and resolution.**
- **Wide variety of scintillator options, including direct Cesium Iodide deposition.**
- **No blooming effects or image distortion.**
- **Radiation-hardened design provides unmatched detector reliability and stability, even in the harshest environments.**
- **Available in 41 cm (16 in), 31 cm (12 in) and 20 cm (8 in) square flat panels.**



Our digital X-Ray detectors offer wide dynamic range and are radiation-hardened for your demanding applications.

You can count on our superb engineering assistance to facilitate integration into your X-Ray system.



at a Glance

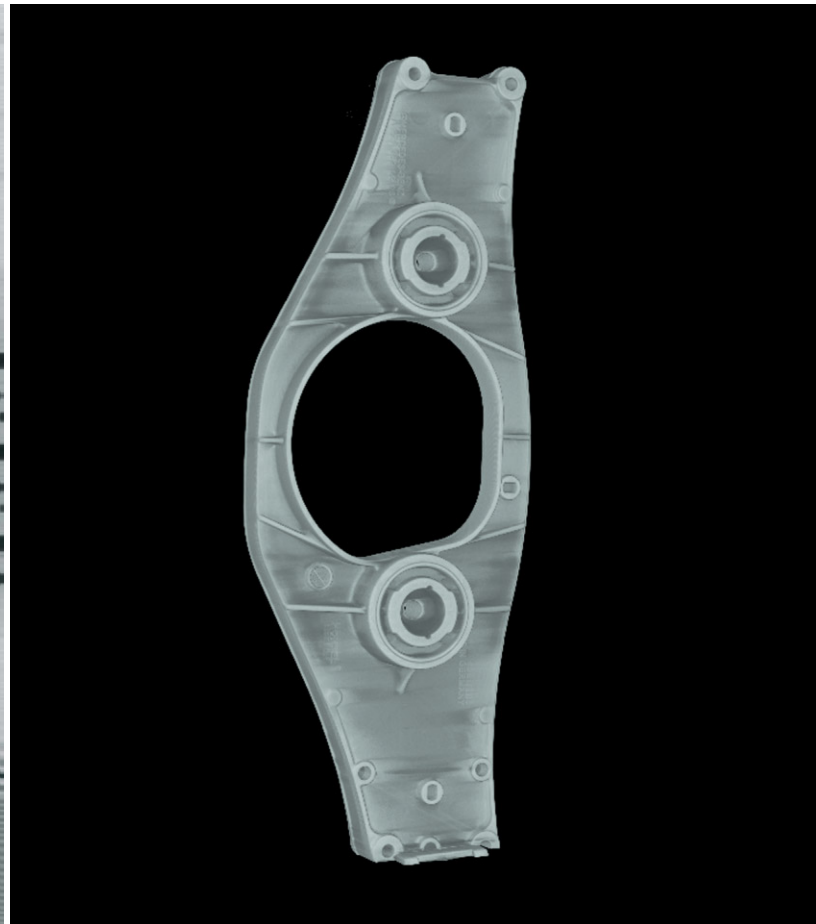
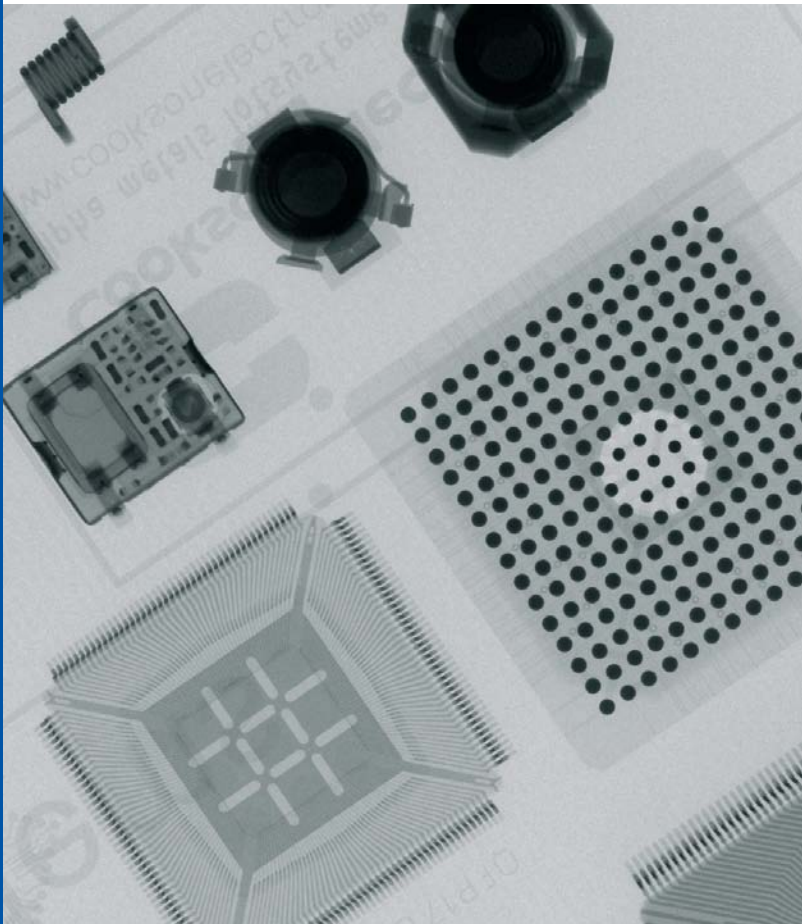
Industrial Applications

Digital X-Ray Detectors for Non-Destructive Testing

Applications

- **Casting inspection**
- **3D cone-beam CT**
- **In-line manufacturing inspection**
- **X-Ray metrology**
- **Film replacement**
- **Crystallography**
- **Security**
- **Pipeline inspection**
- **PCB inspection**
- **Archaeology**
- **Geology**

X-Ray detectors utilized in 24x7 industrial imaging systems are subject to very high radiation dosage and energies within harsh environments. Leveraging our extensive experience in high-energy oncology treatment systems, PerkinElmer has developed a special radiation-hardened detector design capable of withstanding high radiation energies and dosages. These detectors feature our ultra-high contrast and image resolution, which allows you to detect even the most subtle micro-features in a real-time environment.



Our X-Ray detectors provide superior defect recognition and enhanced lifetime for demanding industrial applications.

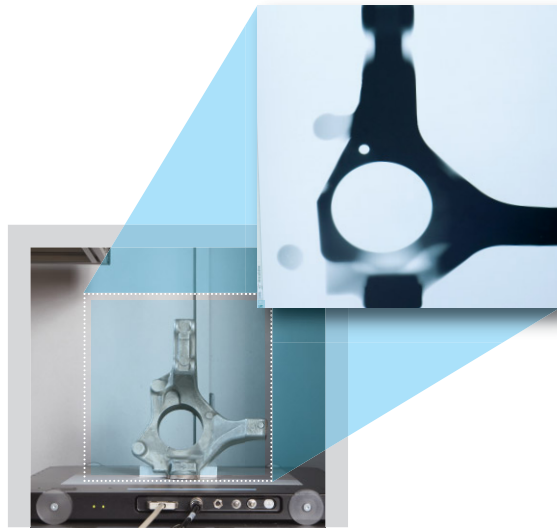


Image Courtesy of YXLON International X-Ray GmbH

Image Courtesy of YXLON International X-Ray GmbH

at a Glance

Medical Applications

Digital X-Ray Detectors for Oncology Treatment, Dental and Veterinary Imaging Applications

Oncology Treatment

Today's state-of-the-art radiotherapy and radiosurgery systems demand the best in digital X-Ray detectors. These oncology treatment systems typically utilize a powerful high energy (MeV) X-Ray source to irradiate the tumor, in combination with a kilovoltage cone-beam computed tomography (CT) or stereotactic imaging system to precisely pinpoint the tumor site, before and during treatment.

PerkinElmer's MeV X-Ray detectors are expressly designed to withstand these high-energy environments and to ensure you longer detector lifetime and lower cost-of-ownership. Our keV detectors provide you with exceptional image quality and contrast resolution to delineate fine anatomical structures.

Dental Imaging

PerkinElmer has pioneered the use of a-Si X-Ray detectors in 3D cone-beam CT system for oncology treatment as well as a host of industrial imaging applications. This state-of-the-art imaging technology is now available to bring superior image resolution and speed to panoramic dental systems.

Veterinary Imaging

Today, a-Si digital X-Ray detectors are making their way into veterinary imaging systems with excellent results. Companion animals and agricultural livestock are now benefiting from the same technology used in our X-Ray detectors for human patients. This advanced technology is now available with more cost-effective alternatives, suitable for digital veterinary imaging systems.

Applications

- **Radiotherapy**
- **Radiosurgery**
- **Therapy simulation**
- **Brachytherapy**
- **3D cone-beam CT**
- **Proton / particle therapy**
- **Dental**
- **Veterinary**
- **Bone densitometry**



Image Courtesy of Elekta Ltd.

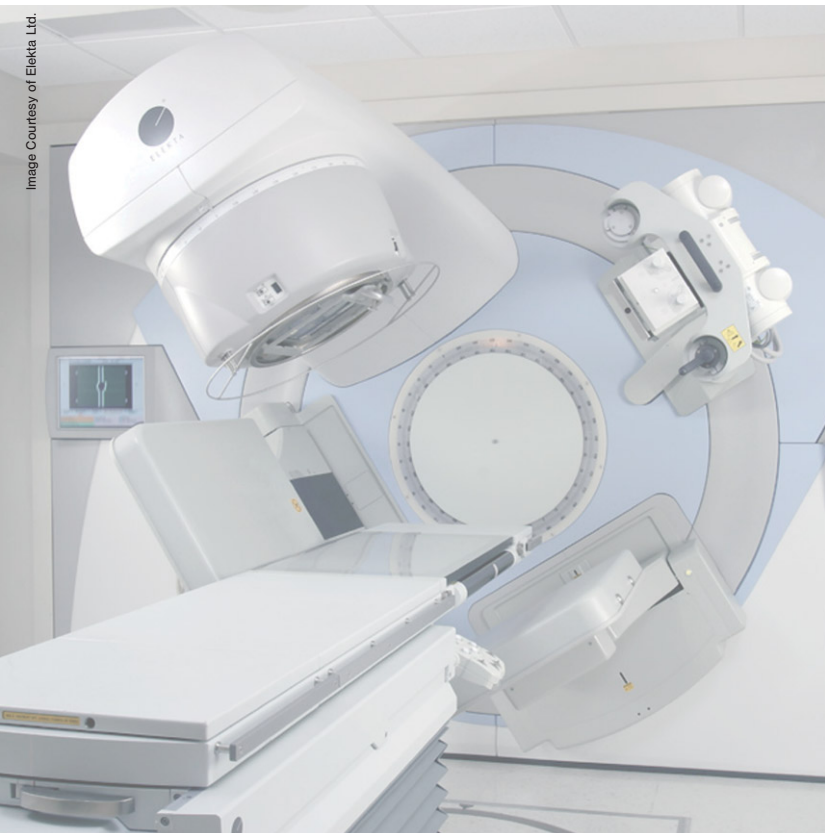


Image Courtesy of Siemens AG



You can trust PerkinElmer
for your demanding industrial
and medical applications.
Let our experience enhance
your X-Ray systems.



Image Courtesy of Carl Zeiss IMT GmbH



About PerkinElmer

PerkinElmer, Inc. is a global technology leader driving growth and innovation in Health Sciences and Photonics markets to improve the quality of life. The Company reported revenues of \$1.8 billion in 2007, has 9,100 employees serving customers in more than 150 countries, and is a component of the S&P 500 Index.

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