

Optical Module X-ray Detection



Overview

High-speed, high-resolution, and wide dynamic range X-ray digital imaging device that provides high-quality images for X-ray non-destructive inspection. Cameras useful for in-line imaging applications requiring high-speed operation with. The AS5920M is a 72x24 pixel, four-side buttable module solution for photon counting applied for spectral computed tomography detectors. The BSIP allows on the. Flat and curved multilayer X-ray optics can be used as monochromators, collimators or focussing optics in X-ray diffraction, X-ray reflectometry, X-ray fluorescence analysis and for synchrotron applications. Due to the detector's robust. Based on Linear Si PD scintillation detection chips, supporting both single-energy and dual-energy X-ray detection Shanghai North Optics offers a series of custom-tailored Detector Boards for X-Ray Imaging Systems. High performance X-ray sources and detectors (sensors/cameras) are the.



Article Content

Feb 04, 2026

Materials innovation and electrical engineering in X-ray detection

This article reviews the latest advancements in metal halide perovskite-based X-ray detection, with a focus on fundamental and performance metrics of both direct and indirect X-ray...

Aug 17, 2025

X-ray sensors

New generations of detector solutions from ams OSRAM are enabling equipment makers to achieve both these goals simultaneously, allowing reductions in x-ray

Oct 25, 2025

Multidisciplinary evaluation of X-ray optical fiber sensors

We report the complex evaluation of an extrinsic optical fiber sensor for X-ray detection, consisting of different phosphor materials (ZnS:Ag, Gd₂O₂S:

Jun 25, 2026

Quantum Dots Microstructured Optical Fiber for X-ray Detection

Microstructured optical fiber end SEM image of 138 inclusions, or holes, which extend the length of the fiber taken at 30 keV. Quantum dots scintillation materials are placed in these inclusions to form an x

Mar 17, 2026

Microstructured optical fiber for x-ray detection

Quantum dot scintillating fibers are compared to a commercial CdTe detector. Atomic energy change from x-rays releases visible photons from scintillator material. Photons are captured in waveguide

Jul 07, 2025

X-ray non-destructive inspection products

These sources and detectors enable the acquisition of sharp and clear X-ray images so system manufacturers can meet the increasingly demanding requirements of non-destructive X-ray inspection.

Dec 16, 2025

ams AS5920M Photon Counting Module X-Ray Sensors

The AS5920M is a 72x24 pixel, four-side buttable module solution for photon

Mar 11, 2026

Performance Evaluation of a Modular Detector Unit for X

A research prototype CT scanner is currently under development in our lab. One of the key components in this project is the CT detector. This paper

Dec 01, 2025

Radiation & X-ray sensors | Hamamatsu Photonics

Flat panel devices for x-ray imaging that can be directly coupled to a commercial CCD for real-time radiography. Suitable for a wide range of fields from industrial x

Jul 27, 2025

X-ray imaging and detection using plastic scintillating fibers

This paper discusses the application of plastic scintillating fiber array in X-ray imaging with low-energy radiation. This array is coupled to a multichannel intensified photocathode and then

Sep 22, 2025

X-Ray Detector Boards-NORTH OPTICS-Laser Components, IR

Shanghai North Optics offers a series of custom-tailored Detector Boards for X-Ray Imaging Systems. The products are line-scan x-ray Si photodiode detectors based on scintillators, integrated on data

Dec 07, 2025

PerkinElmer | Science with Purpose

We believe in the power of science to transform our world. Together with scientists and operators worldwide, we empower progress by providing trusted insights and

May 17, 2026

X-Ray Detectors: Selection & Applications Guide

Mainstream Detector Types and Technical Comparisons Flat Panel Detectors (FPD) Strengths: High resolution, real-time imaging (ideal for

Oct 05, 2025

XEye - Radiation-stable X-ray detectors

The consistently high image quality and long service life of the XEye digital X-ray detector developed at the Fraunhofer Development Center for X-ray Technology

Jun 26, 2026

Fiber X-Ray Detectors | Springer Nature Link

The X-ray detector, as one of the most momentous modules of a related equipment, plays a vitally important role in the application of X-ray. At present, X-ray detectors are mainly used

May 29, 2026

Development of position sensitive detector module using scintillator ...

We explore the use of scintillation detectors coupled with silicon photomultipliers (SiPMs) as position sensitive hard x-ray spectroscopic detectors for potential applications in the field of high-energy

Dec 21, 2025

A new generation of direct X-ray detectors for medical and ...

Indirect conversion detectors are based on scintillating films where the absorbed X-ray produces photons in the scintillator, and the photons are subsequently detected by a photosensor.

Aug 09, 2025

Technical note / X-ray detectors

In the low energy X-ray region called the soft X-ray region from a few hundred eV to about 20 keV, direct detectors such as Si PIN photodiodes, Si APDs, and CCD area image sensors are utilized. These

Jun 23, 2026

X-Ray Detectors: Selection & Applications Guide

As the “eyes” of an X-ray imaging system, detectors play a pivotal role in defining image clarity, inspection efficiency, and result reliability. Whether

Jan 17, 2026

Recent Development in X-Ray Imaging Technology:

X-ray imaging is a low-cost, powerful technology that has been extensively used in medical diagnosis and industrial nondestructive inspection.

Oct 03, 2025

X-ray Optics

Flat and curved multilayer X-ray optics can be used as monochromators, collimators or focussing optics in X-ray diffraction, X-ray reflectometry, X-ray fluorescence analysis and for synchrotron applications.

Oct 20, 2025

MOXTEK Optical and X-ray Components Manufacturer

X-ray products: detectors, tubes, Beryllium/Polymer xray windows, Optics: PBS, ultraviolet/infrared polarizers

Jul 19, 2025

Medical & Health

ams OSRAM is a leader in computed tomography and digital X-ray for medical imaging. We design and manufacture unique medical imaging sensing solutions.

Sep 15, 2025

Detector Packaging for Medical X-Ray Imaging and X-Ray

Hybrid pixel detector modules are state of the art components in X-ray cameras used in synchrotron radiation experiments and for X-ray imaging applications. In synchrotrons these photon-counting

Dec 27, 2025

Characterization of Scintillating X-ray Optical Fiber Sensors

The paper presents a set of tests carried out in order to evaluate the design characteristics and the operating performance of a set of six X-ray

Aug 14, 2025

3D X-Ray Detector Modules based on Through Silicon

Fraunhofer IZM in Berlin and AGH University of Science and Technology in Krakow have developed 3D hybrid pixel detector modules for X-ray imaging. Each

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