

NEWSPACE MARKET · COMPANY PROFILE



XCAM

United Kingdom · founded 2001 · xcamscientific.com

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PRODUCTS

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SERVICES

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as of 20 August 2026



XCAM

XCAM (trading as XCAM Scientific) is a Northampton, United Kingdom-based specialist detector and camera company that develops high-performance imaging systems for space, science, and industrial applications. The company combines deep expertise in CCD and CMOS sensor integration, vacuum-compatible optoelectronics, and scientific image processing to produce flight-qualified satellite cameras, synchrotron X-ray detectors, and cleanroom contamination monitoring instruments. XCAM's space product line centres on the C3D CubeSat Camera System, which supports up to three CMOS sensors per controller board and has achieved a 100% mission success rate across all flights since 2014, including on UKube-1, AISat Nano, and MIRSAT-1 — giving it TRL 9 status. The newer NuSCIS (New Space Camera Imaging System) platform extends the portfolio with CAN-Bus and SpaceWire interfaces and support for CCD and EMCCD detectors, targeting SmallSat imaging missions requiring higher performance or mission-specific detector configurations. In the scientific instrumentation domain, XCAM has developed the RIXSCam and RIXSCam Mini — multi-EMCCD and single-EMCCD X-ray detector systems for Resonant Inelastic X-ray Scattering (RIXS) experiments at major synchrotron facilities, delivering single-photon detection with below-5-micron centroided spatial resolution in the 250–3000 eV energy range. XCAM's ground support and test equipment includes the VacCam (in-vacuum USB video camera), CAVACam (UHV/XHV CCD/EMCCD camera for ultra-clean environments), PFO 1040 (real-time cleanroom particle fallout monitor using Direct Particle Detection technology), and the Space PFO (ESA-funded autonomous launch fairing contamination monitor). The company also produces Detector Evaluation Systems (Imager Control Systems) for

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

Consultancy and Detector Selection

XCAM offers consultancy services, guiding customers through detector selection, performance evaluation, and refining detector behavior for mission-specific requirements.

Design and Build Complete Camera Solutions

XCAM designs and builds complete camera solutions, from standard products to fully bespoke systems, with expertise in vacuum compatibility, large-area imaging, and multi-detector configurations.

Repair and Maintenance Services

XCAM offers repair and maintenance services for camera and detector systems to ensure their continued optimal performance.

System Integration

XCAM offers system integration services, bringing together mechanical, electronic, and software subsystems to ensure seamless operation of imaging systems.

Testing and Characterisation

XCAM provides comprehensive testing and characterisation services for camera and detector systems, including environmental testing for space systems.

Product catalogue



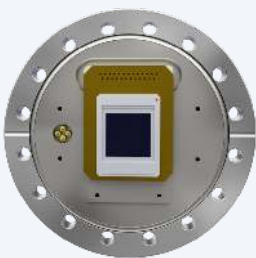
XCAM

C3D CubeSat Camera

Space-qualified modular CubeSat imaging system supporting up to three CMOS sensors with TRL 9 flight heritage since 2014.

Spatial Resolution (at 650 km)	360 m GSD
Image Sensor	1.3 MP CMOS, 5/4 aspect ratio, RGB or B&W
Pixel Size	5.3 μ m
Sensor Resolution	1280 x 1024 pixels
Standard Lens	9.6 mm F/3.0 COTS
Wavelength Range	400-650 nm (RGB)
Exposure Control	Auto or fixed

flight proven · TRL 9 price on request



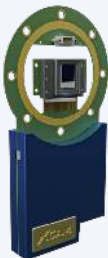
XCAM

CAVACam

Customisable CCD/EMCCD vacuum camera system for UHV/XHV environments, available in flange-mounted or hermetically sealed immersible configurations.

Vacuum Compatibility	UHV / XHV / UCV
Detector Types	CCD, EMCCD
Illumination	Front-illuminated (FI) and back-illuminated (BI)
Readout Speed	Up to 3 MHz
Readout Channels	Up to 4
Minimum Sensor Temperature	-50 deg C
F-model Mounting	Conflat flange

price on request



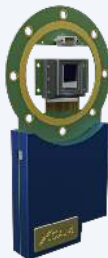
XCAM

Detector Evaluation Systems

Imager Control Systems for evaluating Teledyne e2v CIS120, CIS125, CIS300, and ChromaD scientific imaging sensors with Camera Link, Ethernet, and USB 3 interfaces.

CIS 120 Sensor Format	2048 x 2048 pixels
CIS 120 Pixel Size	10 μ m
CIS 120 Illumination	Back-illuminated (visible, UV, EUV)
CIS 120 Noise	3 e- RMS
CIS 120 Data Interface	Camera Link
CIS 125 Data Lines	20
CIS 125 Data Interface	Ethernet

price on request



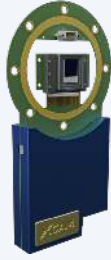
XCAM

Imager Control System (ICS)

The Imager Control System (ICS) is an electronic interface for managing and operating imaging sensors, providing precise power, current, and voltages for reliable function and enab

Sensor	Teledyne e2v 'Capella', 2k x 2k back-illuminated, 10 μ m pixels
Applications	Visible, UV, and EUV
Noise	3 e- rms
Data Interface	Camera Link
Software	Python code included
Thermal	Temperature sensing connectivity, thermal control

price on request



XCAM

Imager Control System (ICS) for Detector Evaluation

The Imager Control System (ICS) is an electronic interface for managing and operating imaging sensors, providing precise power, current, and voltages for reliable function and enab

Sensor	Teledyne e2v CIS 300
Format	Up to 9k x 9k pixels
Data Lines	12
Thermal	Temperature sensing, thermal control connectivity
Data Interface	USB 3
Software	Python code included

price on request



XCAM

NuSCIS Space Camera

Compact multi-sensor SmallSat/CubeSat imaging payload with CAN-Bus and SpaceWire interfaces, supporting CMOS, CCD, and EMCCD detectors.

Dimensions	9.5 x 9.1 x 2.7 cm
Format	PC104 1/4U
Mass	From 100 g
Peak Power Consumption	4 W
Power Interface	5 V
Operating Temperature	-30 to +65 deg C
Survival Temperature	-40 to +85 deg C

price on request



XCAM

PFO 1040

Real-time particle fallout monitor for cleanrooms using Direct Particle Detection (DPD) technology, sampling 4 cm2 at up to 10 samples per hour.

Total Detection Area	4 cm2
Sample Rate	10 per hour
Particle Detection Range	5 to >750 um
Operating Temperature	+20 to +35 deg C
Housing Material	Aluminium
Dimensions (L x W x H)	178 x 178 x 92 mm
Particle Classification	Size, shape, distribution; particle/fibre

price on request



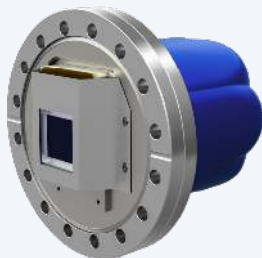
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RIXSCam

Multi-EMCCD soft X-ray detector system for RIXS synchrotron experiments, achieving single-photon detection with sub-5 um spatial resolution.

Maximum Active Area	78.33 x 25.73 mm
Active Pixels (H x V)	4896 x 1608 pixels
Pixel Size	16 x 16 um
Readout Rate	3 MHz
Post-processed Spatial Resolution	< 5 um
System Noise (with EM gain)	<=1 e- RMS
System Noise (no EM gain)	<=140 e- RMS

price on request



XCAM

RIXSCam Mini

Compact single-EMCCD soft X-ray detector for RIXS experiments with Peltier cooling and sub-5 um centroided spatial resolution.

Total Active Area	26.11 x 25.73 mm
Active Pixels (H x V)	1632 x 1608 pixels
Pixel Size	16 x 16 um
Readout Rate	3 MHz
System Noise (HR output)	<=15 e-
System Noise (LS gain 150)	<=1 e-
System Noise (no LS gain)	<=100 e-

price on request



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Space PFO

ESA-funded autonomous particulate contamination monitor for space launch vehicle fairings, detecting particles from 5 um during ascent.

Total Detection Area	4 cm2
Sample Rate	Every 10 seconds (minimum)
Minimum Detectable Particle Size	5 um (100% detection)
Maximum Detectable Particle Size	>750 um
Data Acquisition Lifetime	>=254 seconds
Post-flight Data Transfer Lifetime	>=5 hours
Operational Temperature	-20 to +80 deg C

price on request



XCAM

VacCam

Compact USB in-vacuum video camera for monitoring processes inside vacuum chambers, rated to 10e-6 mbar with built-in LED illumination.

Dimensions	50 x 50 x 60 mm (excl. lens and USB connector)
Image Sensor	1.3 MP CMOS, 1/1.8 inch format, RGB or B&W
Pixel Size	5.5 um
Lens Mount	C-mount, wide-angle fixed focus
Wavelength Range	400-1000 nm
Vacuum Operating Level	10e-6 mbar
Frame Rate	Up to 10 fps

price on request

Contact XCAM

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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