

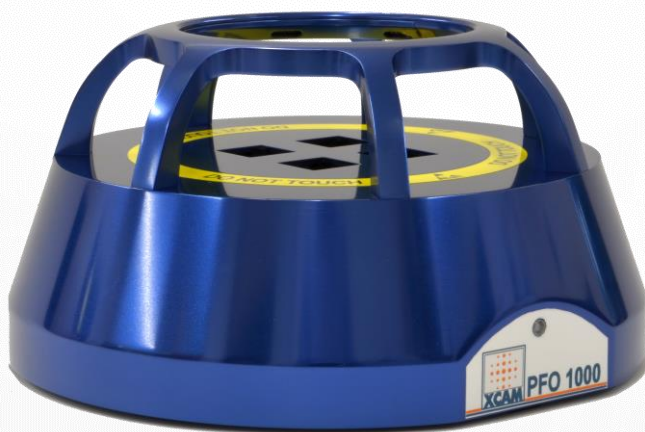


PFO 1000 Monitor

Real-Time Particulate Fallout Monitoring for Cleanrooms

Introduction

XCAM's PFO 1000 provides real-time monitoring of particle fallout deposition for cleanrooms. Whilst airborne sensing is ideal for small particles which remain suspended in the air and are removed by filtration, the higher risk to operations can be from particles larger than $5\mu\text{m}$, which more quickly deposit on surfaces, leading to contamination and yield losses.



XCAM PFO 1000 Series

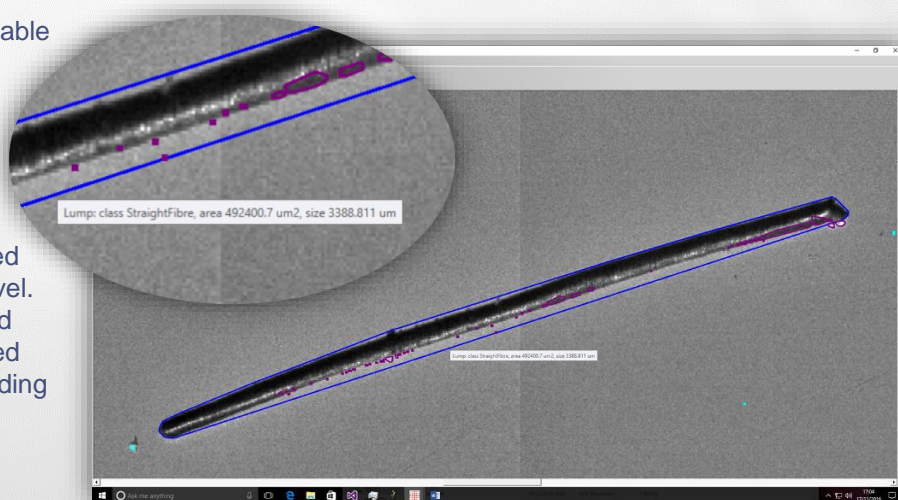
XCAM's PFO1000 series provides real-time monitoring ensuring particle fallout trends can be tracked, contamination incidents can be identified as they occur, and the time and cost of monitoring is reduced by removing the need for samples to be retrieved. Alarms can also be triggered when cleanliness limits are exceeded.

Featuring XCAM's patented Direct Particle Detection (DPD) technology, the PFO 1000 series uses high performance silicon sensing to directly observe particles settling on the surface of the sensor. Advanced recognition algorithms detect particle size and profile, providing particle size distribution statistics.

Particulate Interrogation

Powerful zoom features enable individual objects within an image to be interrogated, displaying properties including classification, size and area.

Particulates can be detected to below the five-micron level. Particles, straight fibres and curly fibres are differentiated and colour classified according to their shape.

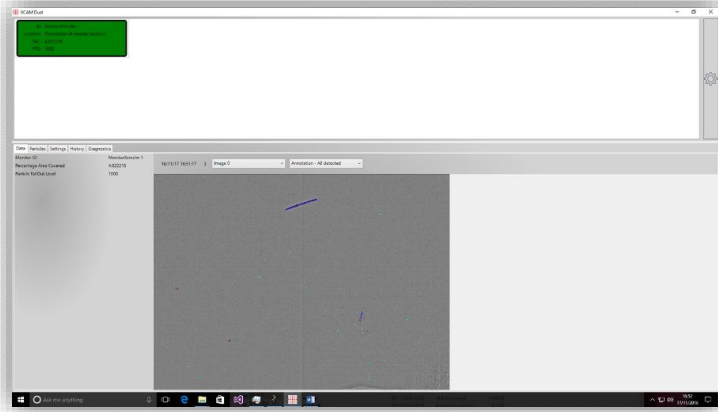




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Real-Time Imaging of Particulates



Images are displayed on-screen and can be saved in both raw and processed forms for retrospective viewing, comparison and interrogation.

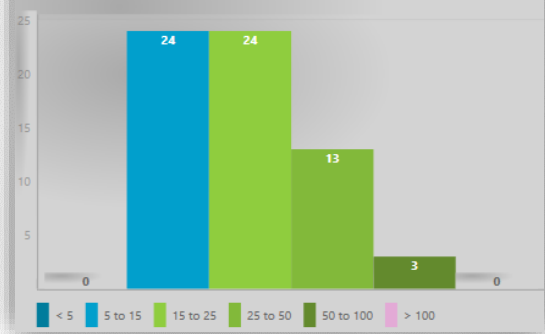
Up to ten monitors can be connected and displayed within the application software in order to monitor several locations simultaneously.

Track Trends and Report Statistics

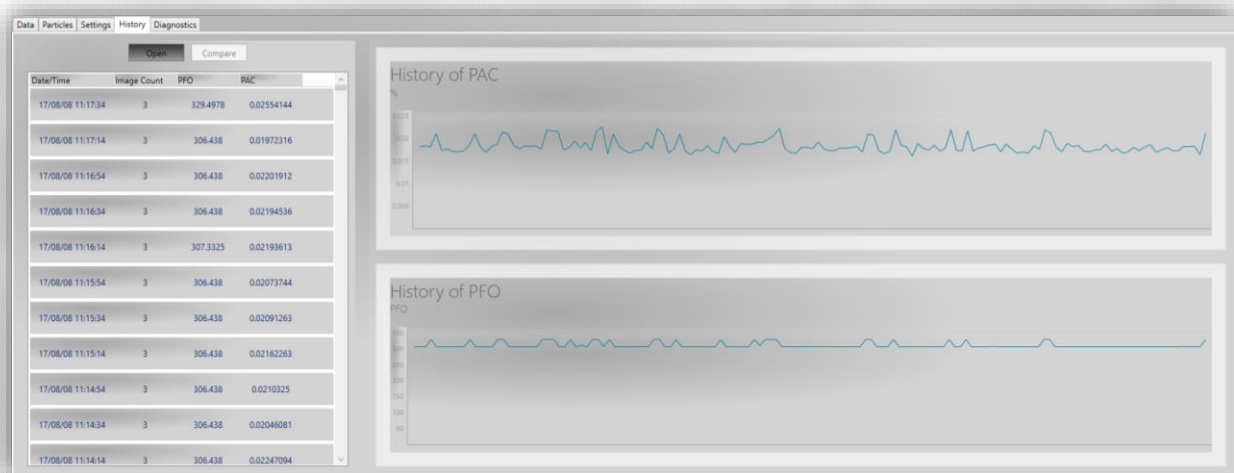
A histogram with user-definable particle size bins displays the particle size distribution. Preset particle bins can also be selected for reporting to ISO 14644-9 and IEST-STD-CC1246E standards.

Percentage area covered (PAC) - the proportion of the area covered by particulates, and PFO - an interpolation between different cleanliness levels according to international standards, are both reported with every measurement performed.

Particle size distribution, μm



PAC and PFO level are displayed graphically over time so that trends can be tracked and incidents identified. Alerts can be set up which notify the operator when cleanliness limits are breached.

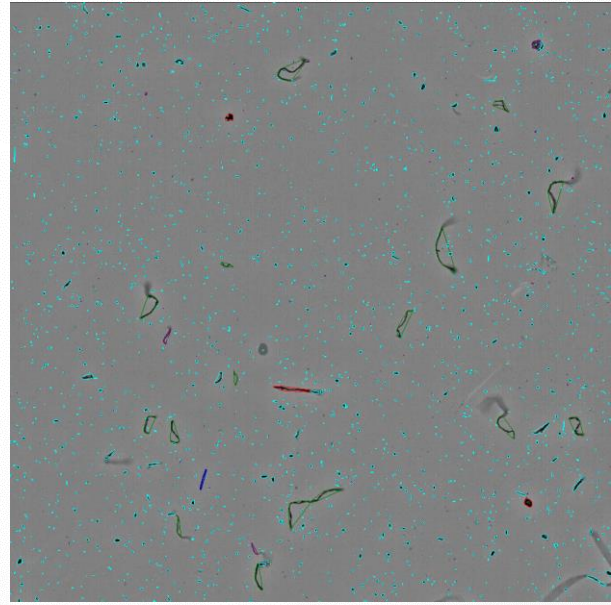
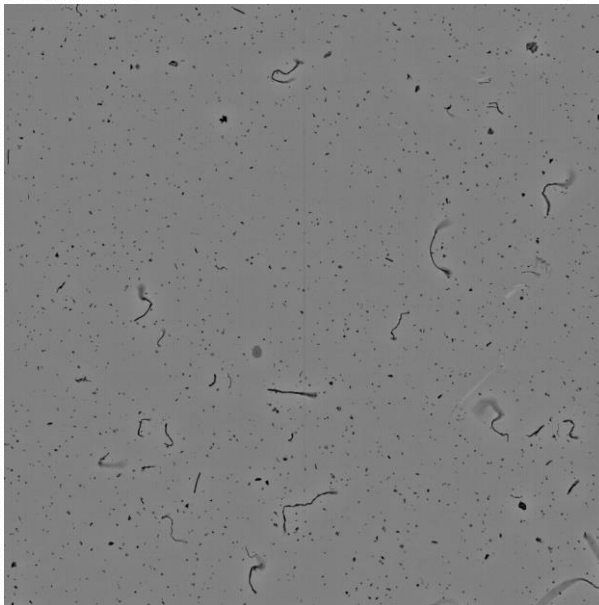




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Shape Analysis and Classification of Particulates



PFO 1040

The PFO 1040 model makes use of all four sensors in order to maximise the sample area, improving the statistical significance of your results. The PFO 1040 is now available to purchase – please enquire for more details.

PFO 1040 Specifications

Total Detection Area	4 cm ²
Sample Rate	10 per hour
Reporting	XCAM PFO Reporting Suite
Particle Readout	Size, shape, particle/fibre classification, distribution
Particle Detection Range	5 µm to 750 µm
Alarms	Percentage area covered (PAC) alarm PFO cleanroom level alarm
Operating Temperature Range	+20 to +35 °C
Storage Temperature Range	0 to +40 °C
Power	5 V DC
Power Supply	110-240 V AC, 400 mA
Housing Material	Aluminium
Dimension (LxWxH)	178 x 178 x 92 mm
PC Interface	USB 2.0
PC Requirements	64-bit, intel core i7, 8 GB of RAM (recommended)

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