

Open-area Smoke Imaging Detection





Open-area Smoke Detection Reinvented

Large, open spaces – airports, train stations, stadiums and shopping malls – are disasters waiting to happen without reliable fire detection. Open-area Smoke Imaging Detection (OSID) by Xtralis is a new technology designed specifically for these environments, enabling early detection and response to save lives and prevent service disruptions.

OSID uses a sophisticated algorithm to map and compare the strength of infrared (IR) and ultraviolet (UV) light signals from detectors configured in the space, regardless of cavernous or odd shapes. The resulting 3-D “fire-web” allows the smoke source to be pinpointed and addressed in real time.

OSID also reduces the costs of installation and maintenance as the emitter batteries have a 5 year-plus lifetime.

Powerful Features

- Maximum detection range up to 150 meters (492 ft)
- Status LEDs for fire, trouble and power
- High false-alarm immunity
- Dust and intrusive solid object rejection
- Easy alignment with large adjustment and viewing angles
- High alignment tolerances
- Simple DIP switch configuration
- Dual wavelength LED-based smoke detection
- Limited maintenance requirements
- Conventional alarm interface for straightforward fire system integration
- Configurable alarm thresholds
- Both 5 year-plus lifetime battery powered and wired emitters available

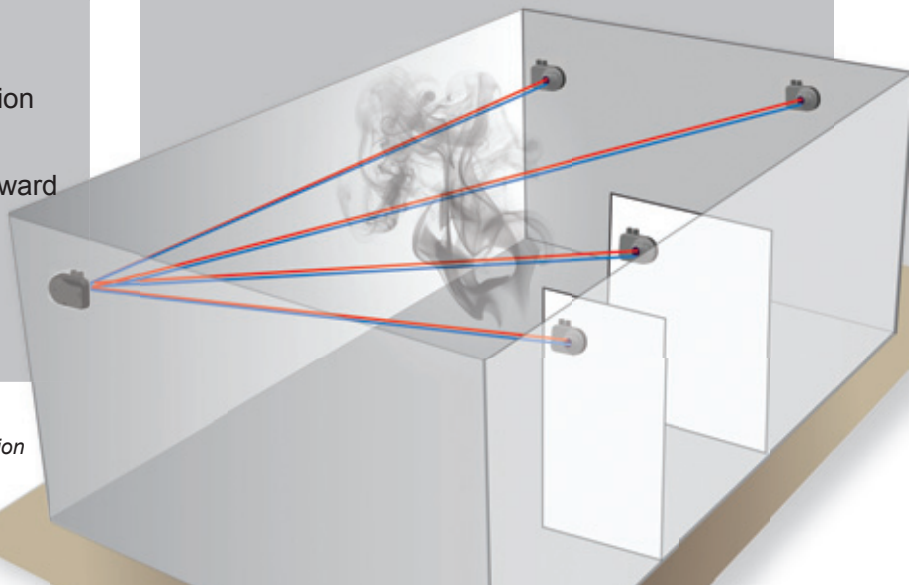
Superior Benefits

- Ideally suited to protect large, open areas
- Full supervision of system performance (e.g. obstruction by foreign objects, need for maintenance, etc.)
- Absolute detection of all smoke types
- Simple and low-cost installation
- Reliable detection in all ambient lighting conditions
- Excellent false-alarm immunity
- Low installation costs with simple and fast alignment
- Cost-effective detection for challenging environments
- Low maintenance costs

Limitations of Traditional Smoke Detection Methods

- Susceptible to nuisance alarms
 - Dust and dirt
 - Birds and insects
 - Foreign objects
 - Fog and steam
- High installation and maintenance costs
 - Difficult to align
 - Susceptible to building movement
- Affected by ambient lighting
- Inconsistent response to various smoke types

True spatial detection





OSID by Xtralis — Ideal for These Applications and Industries



Shopping Malls
3-D arrangement may be configured to protect many large, open spaces



Train Stations
Non-intrusive detection in any ambient lighting



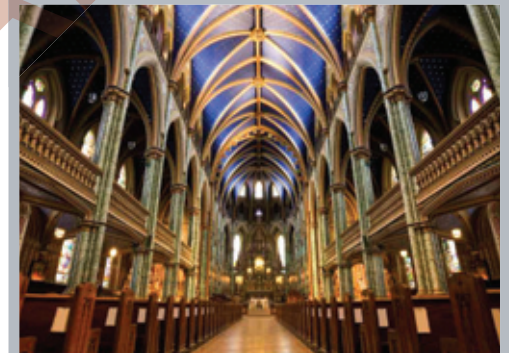
Suspended Ceilings
Discreet and flexible installation



Concert Halls
Multi-layer detection



Long Corridors
'Addressability' for long corridors



Heritage Buildings
Discreet and non-intrusive detection



Challenging Logistics
Simple maintenance with no disruption to operations



Dirty Environments
Discriminates against dust, dirt and other small particles to reliably detect smoke

- Hotel and office tower atriums
- Shopping centers and mega retail stores

- Churches and cathedrals
- Airport terminals and railway stations

- Exhibition and convention centers
- Indoor stadiums and arenas
- Industrial and manufacturing facilities

Unique Detection Technology

OSID by Xtralis innovatively combines two technologies to reliably detect smoke in large, open spaces.

Dual Wavelength Particle Detection

By using two wavelengths of light to detect particles, the system is able to distinguish between particle sizes. The shorter UV wavelength interacts strongly with both small and large particles, while the longer IR wavelength is affected only by larger particles. Dual wavelength path loss measurements therefore enable the detector to provide repeatable absolute smoke obscuration values, while rejecting the presence of dust particles or solid intruding objects.

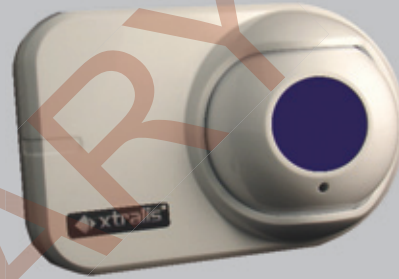
Optical Imaging with Photo-cell Arrays

An optical imaging array in the OSID detector provides a wider viewing angle to locate and capture images. Consequently, the system is easier to install and align and can compensate for drift caused by natural shifts in building structures.

Optical filtering, high-speed image acquisition, and intelligent software algorithms also enable the OSID detector to process images and provide new levels of stability and sensitivity while providing greater immunity to high-level lighting variability.

OSID Configurations

OSID systems may be configured to protect a range of spaces, regardless of shape. The protection zone or “fire web” is determined by the placement of OSID detectors.



Imagers		Emitters	
Field of View		Maximum Detection Range	
Horizontal	Vertical	Standard Power	High Power
10°	5°	150 m (492 ft)	-
40°	20°	60 m (197 ft)	120 m (394 ft)
80°	40°	34 m (112 ft)	68 m (223 ft)

About Xtralis

Xtralis is a leading global provider of powerful, early warning fire detection and security solutions that prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised. We protect more than 40,000 customer sites in 100 countries, including billions in assets belonging to the world's top governments and businesses. For more information about our life safety and security solutions, visit our Web site at www.xtralis.com.

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OSID
by  **xtralis**