

THERMAL AND VISUAL EARLY FIRE DETECTION

Early Fire Detection

Detecting ignition, not consequences: forest, grassland and wildland–urban interface protection.



BUILT ON

Raythink thermal imaging

Genetec Security Center

ERPS fibre ring

Arpyan ComBox

Cobolos EFD is the Arpyan early fire detection solution. Long-range dual-spectrum cameras and panoramic thermal radars from Raythink run fire and smoke analytics on board, locate the hot spot on the map and deliver the alarm into Genetec Security Center with snapshot and video, so the operator can verify and dispatch within moments of ignition.

10 km+

Maximum fire detection range; highly effective detection at 4.2 km

1.5 px

Minimum fire spot: alarm in the ignition phase, before a plume is visible

360° / 2 s

Full panoramic thermal scan, covering 314 km² from a single mast

WHAT IT DELIVERS

Alarm at ignition

A high-precision fire algorithm raises an alarm on a hot spot of as few as 1.5 pixels, minutes before smoke rises above the canopy.

Dual-spectrum, day and night

The visible channel detects smoke and the thermal channel detects heat. Together they hold performance through night, fog, snow and glare.

Analytics on the camera

Fire and smoke algorithms run at the edge with local recording. No separate analytics server is needed at each site.

A position, not just a picture

PTZ orientation, gyro and GPS resolve the hot spot to map coordinates in real time, without operator triangulation.

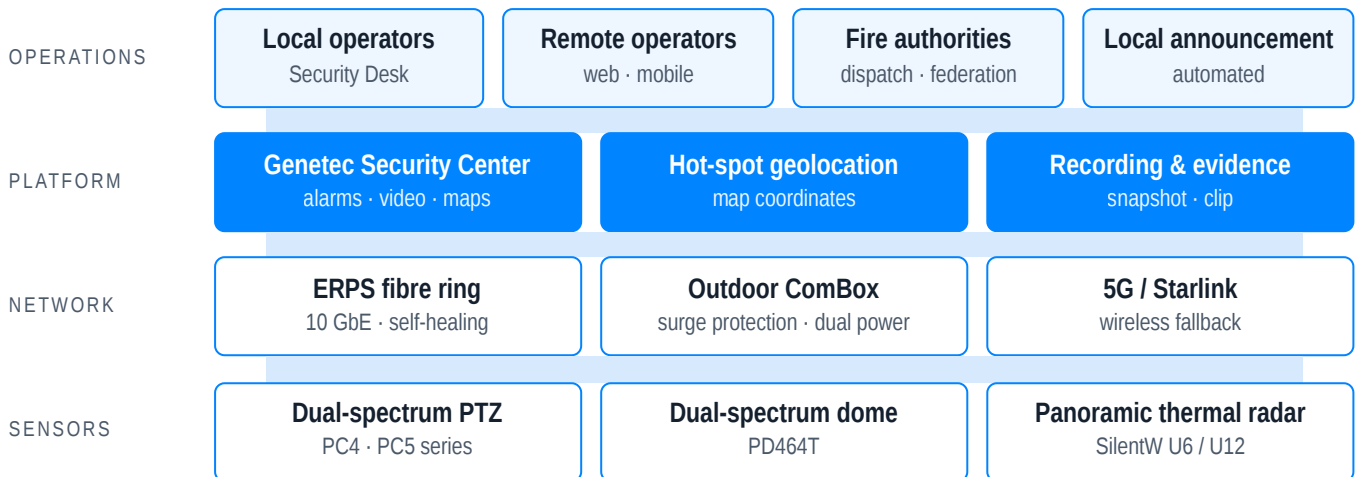
Verified in one view

The head centres on the alarm, zooms and follows it, and video fusion blends visual and infrared for a clear yes or no.

One mast, a whole landscape

A panoramic thermal radar gives a continuous 360° image and can replace up to 70 fixed cameras, with PTZ added for close inspection.

SOLUTION ARCHITECTURE



SENSOR LINE-UP

PC4 Series Dual-spectrum PTZ	Thermal 640×512 or 1280×1024, visible 2688×1520 with 60× zoom, motorised thermal optics to 100 mm. The mid-to-long-range workhorse, with smoke and fire algorithm.
PC5 Series Multi-spectrum PTZ	Thermal optics 30–150 mm, visible zoom up to 10–550 mm. Long-range sector cover, with optional 3 km laser rangefinder and 1500 m illuminator.
PD464T Dual-spectrum dome	640×512 thermal, 2560×1440 visible with 37× zoom. Fire detection to 6.7 km (50 mm lens); radiometric –20 to +550 °C, ±2 °C.
SilentW U6 / U12 Panoramic thermal radar	360° in about 2 seconds, up to 128 targets tracked. Fire detection to 10 km (75 mm lens), 314 km² per unit.

Common to all: uncooled VOx detector, 12 µm, NETD ≤ 40 mK · IP66 · –40 to +70 °C · ONVIF, HTTP API and SDK. Detection ranges depend on target size, atmospheric conditions and installation geometry.

TYPICAL APPLICATIONS

- Forests
- Grassland and open terrain
- Wildland–urban interface
- Resorts and private estates
- Parks and heritage sites
- Municipal and regional fire watch

COMBINES WITH

Surveillance · Industrial Networks · Public Address · Drones & Robots

FROM IGNITION TO DISPATCH

1 Detect The thermal channel flags a hot spot and the visual channel confirms smoke, on the camera.	2 Geolocate PTZ orientation, gyro and GPS resolve the hot spot to coordinates on the map.	3 Centre & track The head centres, zooms and follows the alarm point while the patrol is suspended.	4 Verify Fused image, snapshot and recorded clip are presented to the operator for a yes or no call.	5 Dispatch The confirmed alarm goes to fire authorities and control centres, with automated local announcement.
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