

Forestry Intelligence. Decision-Ready.

Edgegenix is an AI operational intelligence platform for the physical world. Edge AI devices in the forest analyse camera and sensor feeds on site and turn them into verified events; the Edgegenix Cloud AI platform fuses those events with weather, terrain and operational data into one verified decision — so your operators command the response, not the data.

THE CHALLENGE

Vast Estates. Remote Country. Minutes Matter.

Forestry estates span vast, remote country with small crews and long distances. Detection still leans on lookout towers, public reports and satellite passes — each adding delay — while smoke cameras and sensors generate false alarms from dust, cloud and glare. In plantation timber, a late detection is the difference between a contained ignition and a lost compartment.

Vast, remote estates

Huge areas, few people. Every remote compartment is unwatched for most of the day.

Late detection

Towers, public calls and satellite passes add minutes to hours before crews are moving.

False alarms

Dust, cloud and glare trigger camera alerts that burn crew time on verification runs.

Patchy connectivity

Much of the estate has little or no coverage — systems that need the network go blind.

26%

of NSW timber plantations were destroyed in the 2019–20 Black Summer, with more than 70% hit by severe canopy fire.

[Source - Nature Ecology & Evolution, 2021](#)

Verification is the bottleneck.

Smoke cameras and IoT sensors generate false alerts that cost crew and aircraft time. Edgegenix adds an AI verification layer — camera, thermal, weather and sensor data combined — so what reaches your duty officer is real.

WHAT EDGEGENIX DELIVERS

From Raw Field Data to Faster, Safer Decisions

Smoke & Fire Verification

Tower and pole camera detections verified at the edge before escalation, so crews aren't sent to chase dust and glare.

Fire Boundary & Spread Analysis

Boundaries, direction and intensity from thermal and RGB imagery, fused with weather and terrain.

Estate & Asset Monitoring

Roads, bridges, mills and equipment watched by the same network of cameras and sensors.

Prescribed Burn Monitoring

Perimeters, hotspots and containment tracked through planned burns, with a record of conditions.

Post-Fire Assessment

Burn severity mapping, salvage priorities and regeneration monitoring after an event.

Compliance & Reporting

Auto-generated records, logs and evidence for regulatory review and post-incident accountability.

HOW IT WORKS

From Field Data to Operational Decisions

01

Data Acquisition

Cameras and sensors across the estate, plus weather and satellite feeds — your existing hardware or ours.

02

Edge AI Detection

The Edge AI device classifies smoke, flame and hotspots on site and scores confidence — with or without a network.

03

Operational Context

Cloud AI fuses events with weather, fuel and terrain, organising results into incidents and decision-support views.

04

Actionable Output

Dashboards, verified alerts, visual evidence and reporting that support action and accountability.

THE ARCHITECTURE

One End-to-End Platform — Camera to Command

The platform leads; the hardware serves it. Cameras and environmental sensors capture the signal, the Edgegenix Edge AI device detects smoke and fire locally — even with no connectivity — and the Edgegenix Cloud AI platform verifies, adds operational context and delivers one verified decision to your operations centre.

END-TO-END SMOKE & FIRE DETECTION

FROM CAMERA TO VERIFIED OPERATIONAL DECISION

IN THE FIELD

RGB camera
tower / pole · PoE

Thermal camera
day / night

Sensors
weather ·
environmental

EDGE AI

Edgegenix Edge AI

Local smoke & fire
detection

Works without
connectivity

Evidence buffer
store & forward

BACKHAUL

LTE / 5G

Satellite
low-bandwidth

WiFi / Fibre

CLOUD AI

Edgegenix Cloud AI

Verification & fusion

Weather, fuel &
terrain context

Spread modelling

OPERATIONS

Verified alerts

Live dashboard

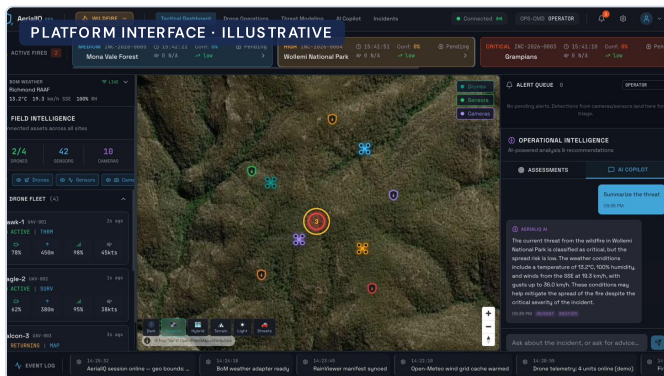
Incident records

Reports & API

The complete Edgegenix smoke & fire platform — from cameras and sensors, through Edge AI, to Cloud AI operational intelligence.

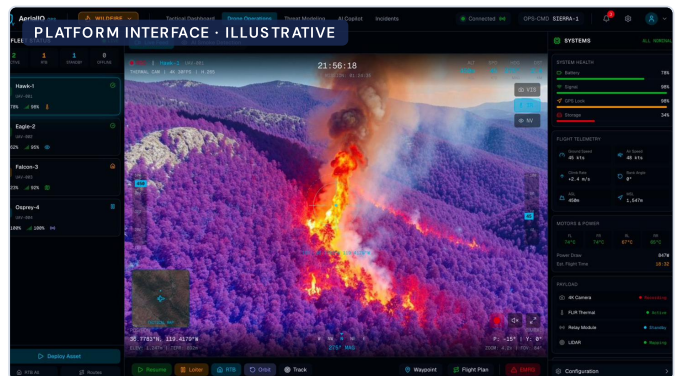
THE EDGEGENIX PLATFORM

From Detection to Decision — One Unified Interface



Tactical Map

Live positions, fire spread overlays and ember zones across the estate.



AI Detection

Smoke and flame classification with confidence scoring on every alert.

INDUSTRIES SUPPORTED

One Platform. Critical Verticals.

Forestry intelligence is one application of a broader operational intelligence platform — built horizontally, deployed vertically across bushfire, agriculture, flood and land operations.

Bushfire & Forestry

Real-time smoke and flame detection, fire spread context, prescribed-burn support and post-fire assessment.

Agriculture & Biosecurity

Smoke-exposure early warning, crop stress and pest monitoring, and targeted intervention support.

Flood

Early inundation detection, extent and change monitoring, and a dated record for response and recovery.

Land & Asset Monitoring

Change detection and dated evidence for estate assets. Boundary determination remains the registered surveyor's legal act.

WHY EDGEGENIX

What Sets Us Apart

Edge-First, Works Offline

Detection runs on the device, in the forest. No connectivity, no problem — it keeps watching and syncs when the network returns.

Australian-Developed AI

Models developed for Australian eucalypt terrain and fire conditions, with research partners at Macquarie University and UNSW.

Onshore Data & Integration

Australian-owned, designed for onshore hosting and data residency. Works alongside existing GIS, EAM and CAD platforms via API.

Decision Layer, Not Just Detection

Sensing is solved; operating on it is not. Edgegenix turns detections into a verified decision and a defensible record.

Human-in-Command Workflow

AI carries the load; your operators keep command. Review and control at every stage — no black-box automation.

Modular Deployment

Off-the-shelf cameras and a modular Edge AI device — standalone or in rugged IP66 pole enclosures — sized to each site.

Ready to see Edgegenix in action?

A structured pilot deployment to validate detection, monitoring and reporting outcomes against your operational requirements — with clear milestones and measurable results.

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