



## Analytics for Thermal Imaging Cameras

### Ngaro Sentinel / Perimeter Surveillance

Advanced system for intrusion detection on restricted access areas.

#### Detection Alarms

- Intrusion
- Prowling
- Dropped / removed object
- Frontier crossing
- Stopped vehicle
- Vehicle driving against traffic
- Invasion
- Fence climbing



Simulation of camera setup. This is not a real installation.

#### Key Differentiators

- **Automatic 3-D radiation analysis of objects on scene. Beyond video analytics.**
- **We use specific algorithms for thermal imaging, no algorithms adapted from CCTV)**
- **Increases detection range. Minimum target size: 1,5 pixels.**
  - 35-50% savings on number of thermal cameras using other thermal video analytics
  - 75-90% saving on number of CCTV cameras using CCTV video analytics
- **Minimum False alarm rate (2-5% rate over total alarms registered).**
- Long range detection. **ATEX housing not required.**
- **Alarm positioning on real UTM coordinates and on real-time. Camera triangulation NOT required, just one camera needed**
- **Certified with principal camera manufactures.** Axis, Flir, Opgal, Raytheon, Pelco, Nec, DRS
- **Integrated with principal VMS on the market-** Milestone, Genetec, Geutebrück, Ganetec, Desiko
- **Generic Camera Mode.** Communicates with every camera on the market, without integration required
- **Domotion.** Automatic domo/s camera positioning for video verifying.
- **Configuration & performance based on meters, not on pixels**
- **Easy & Intuitive configuration**
- **Software license**

## Analytics for Thermal Imaging Cameras

### Ngaro Coastguard

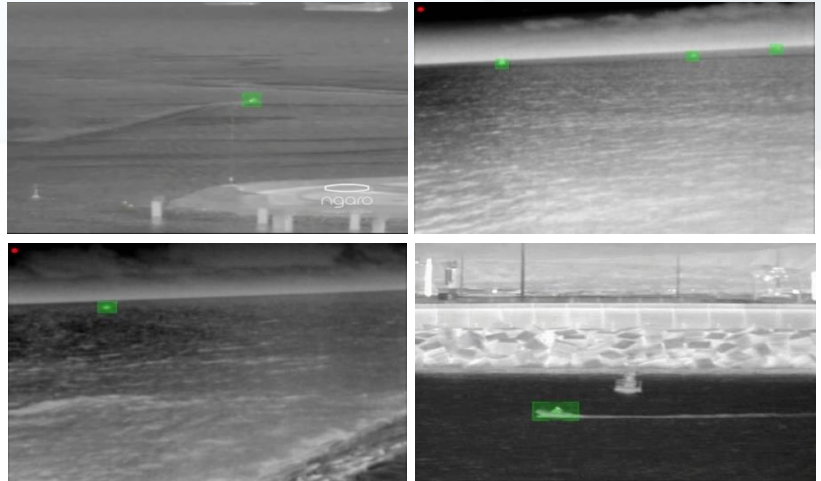
Vessel detection, positioning and tracking system for maritime, fluvial and port scenarios, with either **fixed** or **on-board** camera.

#### Detection Alarms

- Small & large vessels
- Intrusion
- Border crossing
- Prowling /Swimming
- Floating objects detection

#### Industry Sectors

- Island Airport Surveillance



#### Key Differentiators

- **Automatic 3-D radiation analysis of objects on scene. Beyond video analytics.**
- **We use specific algorithms for thermal imaging, no algorithms adapted from CCTV)**
- **Increases detection range. Minimum target size: 1,5 pixels.**
- **Minimum False alarm rate (2-5% rate over total alarms registered).**
- **Does not generate false alarms by waves**
- **Alarm positioning on real UTM coordinates and on real-time. Camera triangulation NOT required, just one camera needed**
- **Patrol Mode. 360° motion while detecting**
- **Dynamic integration with GPS**
- **Multi-target detection.**
- **Integrates with existing RADAR systems**
- **Certified with principal camera manufactures. Axis, Flir, Opgal, Raytheon, Pelco, Nec, DRS**
- **Integrated with principal VMS on the market- Milestone, Genetec, Geutebrück, Ganetec, Desiko**
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## Analytics for Thermographic Cameras

Ngaro Thermal analysis applications are tools which integrate in just one license mechanisms to analyze, treat, generate and manage thermal events on real time.

### Ngaro Immigration Control

Detects

- People with high temperature on crowded areas

Applies to

- Cruise pedestrian control
- Airports
- Train Stations
- Cruise terminals
- Pedestrian access on borders Border



### Key Differences

- **Critical real-time reporting and logging** Real-time reporting of temperature variation events for rapid commissioning and testing.
- Available on **fixed or Portable set-ups**
- **Domotion.** Automatic management & positioning of dome/s camera/s for video verifying.
- **Generates Summary Event Report (SER)** for post-event diagnostics. Available in XML, Excel, PDF formats
- **Heat emission and distance configuration** available by mask configurator
- **Image adjustments** by enhance or lineal temperature
- **Temperature Color palette editor**
- Intuitive **mask design editor**
- **Simultaneous temperature and time-frame analysis.**
- **Boolean logic functions** programing available for alarm triggering
- **Off-line evaluation available.** ( picture: RAW thermometric, video: RAW Thermometric, Ngaro Thermometric compressed )
- **Image or video capture** responding to alarms
- **Digital output** support available ( PLC & ADAM)
- **Digital input** support (PLC)
- **Communications and Integration.** Integrates with existing VMS and Ngaro Beholder (Ngaro VMS)

## Analytics for Thermographic Cameras

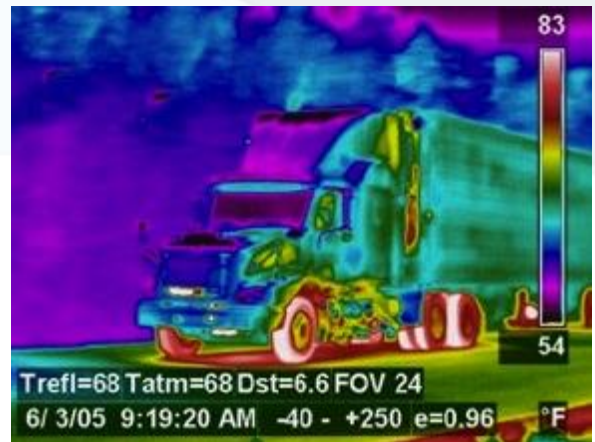
### Ngaro Engine Monitoring

#### Detects

- **Monitoring of over-heated vehicles & parts.**
- **Monitoring of over heated parts on machinery & equipment.**

#### Applies to

- Ferry Load Deck Gate
- Ship Engine room
- Vehicles
  - Engines
  - Brakes
  - Cooler
- Machinery
  - Conveyor Belts
  - Elevators
  - Vehicle Brakes



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## Analytics for Thermographic Cameras

### Ngaro Transformer Monitoring

Detects

- **Transformer thermal and through-fault monitoring.**
- Temperature oscillation, hotspot, insulation aging acceleration factor, and loss of life.

Applies to

- Transformer Monitoring
- Key electrical conductors



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## Analytics for Thermographic Cameras

### Ngaro Tank Monitoring

#### Detects

- Insulation aging acceleration factor
- Loss of life on insulation.
- Load Volume

#### Applies to

- Fuel tanks
- Gas Tanks



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## Technical Details

All our systems are fully compliant with current regulations and the product codes for our systems are listed below.

**Up to 8 cameras:** NG7, NG2U, NG4U

**Up to 16 cameras:** NG2U, NG4U

## Complementary Tools

**Ngaro Domotion.** Automatic management & positioning of dome/s camera/s for video verifying. Includes algorithms to automatically position the camera with better view and capable to establish priorities among domes to follow the target with one or several cameras simultaneously.

**Ngaro® Beholder** Ngaro® VMS allows the operator to monitor and manage the information provided by Ngaro Analytics or third party VMS.

### ngaro® Desktop

Alarms status and operative verification module compatible with Ngaro® systems



### ngaro® GIS

Module to monitor the status and operation of the surveillance system over digital cartography



### ngaro® Viewer

Application for simultaneous display of thermal and CCTV video streams with OSD overlay of alarms



## Compatible Cameras



## Compatible VMS

