

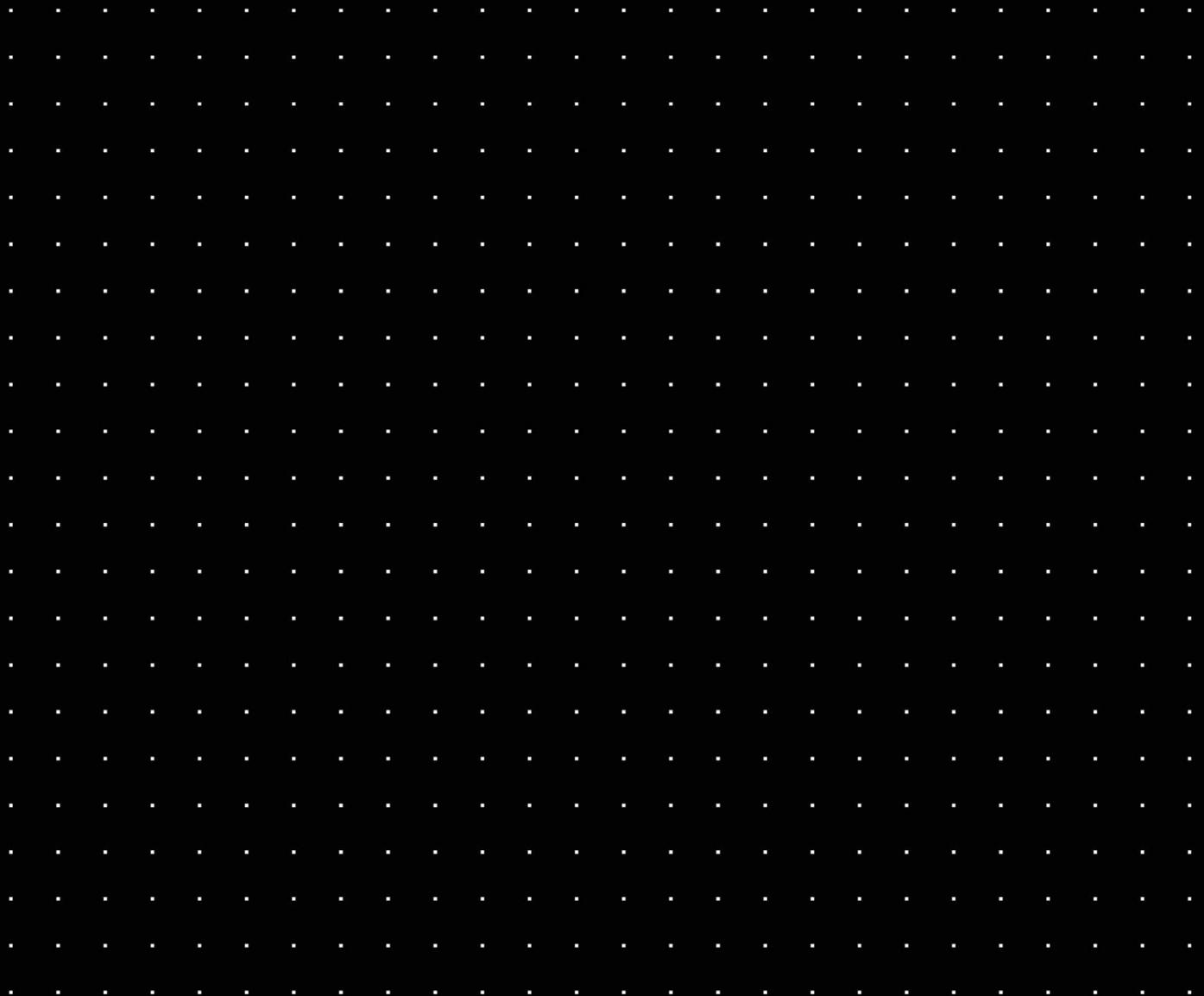
GEUTEBRÜCK

# A&E Specifications

## G-Tect/Perimeter+

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## **PERIMETER+ VIDEO ANALYSIS SYSTEM.**

### **Manufacturer and certifications:**

- The manufacturer shall have a Quality Management System which shall be certified by ISO 9001:2015 standard.

### **General architecture:**

- The video analytics system shall be able to automatically generate events by analyzing the content of real time video streams.
- The video analytics system shall provide a management application for system configuration and alarm monitoring.
- The video analytics system shall provide a Central Monitoring Station application for remote monitoring including a click-thru mechanism with automatic alarm reporting and video verification on three mouse clicks: snapshot, video clip and live view.
- The video analytics system shall integrate with Video Management Systems (VMS) and Physical Security Information Systems (PSIM) from 3rd party manufacturers including at least: Avigilon - Geutebrück G-Core
- The video analytics system shall be able to retransmit an RTSP video stream which will be discovered by a remote software as a virtual ONVIF camera.
- The video analytics system shall integrate with Central Management Software (CMS) from 3rd party manufacturers.
- The video analytics system shall have an API (Application Programming Interface) so that a 3rd party software can interact with the video analytics system.

### **Day/night and thermal cameras:**

- The video analytics system should have specific algorithms to analyze video streams coming from day/night or thermal cameras.
- The video analytics system shall be able to read streams from at least, but not limited to, the following camera manufacturers: 360 Vision, Acti, AMG, Arecont, Avermedia, Avigilon, Axis, Bosch, Canon, Cohu, Dahua, D-Link, DRS, Eneo, Flir, Geutebrück, Geovision, Grundig, Hanwha, HikVision, Honeywell, Idis, IndigoVision, Infinova, Interlogix, Ionodes, JVC, LG, Lilin, Mobotix, Opgal, Panasonic, Pelco, Pixord, Provision, Samsung, Siemens, Sony, Sunell, Telefunken, Toshiba, Vivotek, Xenics.
- The video analytics system shall be able to read streams from at least, but not limited to, the following thermal camera manufacturers: ACTi, Axis, Bosch, Dahua, Dali, DRS, Flir, Geutebrück, Hanwha, Hikvision, IndigoVision, IrLab, Mobotix, Okean, Opgal, Pelco, Sunell, Tanz, Vicon, Xenics.

### **Camera configuration:**

- The video analytics system shall be capable of automatically learning the camera scene to automatically adapt to changing lighting and environmental conditions such as wind, rain, fog or snow.
- The video analytics system shall be able to define a region of exclusion to filter out irrelevant areas and increase sensitivity of critical areas.

- The video analytics system shall be able to automatically generate the perspective of each camera by walking in front of the camera and without the need of introducing the minimum and maximum size of an object.
- The video analytics system shall provide a zoom calibration tool so that the lens of the camera can be adjusted to give the correct zoom level for that camera.

**Security rules:**

- The video analytics system shall allow delayed arming and delayed disarming.
- The video analytics system shall have a powerful analytic engine with a rich library of behaviors so that complex rules can be created to manage alarm scenarios.
- The video analytics system shall be able to differentiate between a person and a vehicle using a predefined model.
- The video analytics system shall be able to generate an alert when a target is moving in the wrong direction.
- The video analytics system shall be able to generate an alert when a target enters into or exits from a predefined region.
- The video analytics system shall be able to generate an alert when a target appears in or disappears from a predefined region.
- The video analytics system shall be able to generate an alert when a target is loitering in the image or inside a predefined region.
- The video analytics system shall be able to generate a tampering alert when the camera is obstructed, masked, hooded or repositioned.
- The video analytics system shall be able to generate an alert when a digital input changes its state.
- The video analytics system shall be able to combine multiple rules to form complex detection scenarios.
- The video analytics system shall record snapshots and videos with optional visual alarm indicators (colored boxes around objects detected and colored lines indicating the trajectory of the objects detected).
- The video analytics system shall be able to generate snapshots and video clips including a digital signature so that the authenticity of the recordings can be certified as generated by the manufacturer system and as not being manipulated by an external actor.

**Advanced technologies:**

- The video analytics system shall have an image stabilization feature that reduces the vibrations and jitter from shaking video sources such as camera mounted on poles moving with the wind.
- The video analytics system shall be able to analyze video streams in corridor view mode (vertical video streams with a vertical resolution higher than horizontal resolution) while keeping the aspect-ratio of these video streams.

- The video analytics system shall have a smart auto PTZ function that moves ONVIF PTZ cameras to a preset position when a target is detected and generates a second video clip for each alarm corresponding to the recording of the PTZ camera.
- The video analytics system shall have a virtual infrared (Virtual IR) lightning feature that can switch on and off an advanced non-linear image enhancement algorithm in a predefined region of the camera.
- The video analytics system shall have a Virtual IR feature that improves the contrast in certain areas of the image and improves the detection rate in these areas.

**PTZ Autotracking:**

- The video analytics system shall have a PTZ autotracking function which controls a PTZ ONVIF IP camera and follows a person while moving about the site when a PTZ preset is launched.

\* The autotracking function is an optional module not available by default.

**Artificial Intelligence. Beyond deep learning:**

- The video analytics system shall use technology based on the fusion of Deep Learning and traditional Machine learning.
- The video analytics system shall use last generation Deep Learning based technology which provides an unprecedented reduction in false alarms.
- The Deep Learning based technology shall work together with motion based technology in order to be able to detect under the most demanding conditions.
- Deep Learning based technology shall work with day/night and thermal imagery.
- The Deep Learning based technology shall be able to trigger different alarms for persons and vehicles.
- The Deep Learning based technology shall be able to trigger tampering alarms on video surveillance cameras.
- Deep Learning based technology shall run in a dedicated graphical processing unit (GPU), different than the central processing unit (CPU) and placed inside the video analytics system.

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