SEDOR® AI Intruder Detection

SEDOR® Video Analysis Software for the protection of freely definable areas against unauthorized access with a powerful Artificial Intelligence object classification based on neural networks

The SEDOR® AI Intruder Detection software allows for the protection of freely definable areas indoors and outdoors against unauthorized access. The analysis software detects objects approaching a defined area and evaluates their direction of movement and dwell time. The detected events are fed into a powerful object classification system based on neural networks and finally alerted with a corresponding message.

Video Content Analysis

The SEDOR® AI Intruder Detection software is designed for the efficient use of Video Content Analysis data from Dallmeier network cameras and Panomera® systems. The VCA function of the cameras detects movements and objects in the uncompressed image and analyzes them in real time on the basis of highly developed algorithms. The VCA data is made available via the network and forms a solid basis for in-depth analysis with SEDOR®.

Configuration

The SEDOR® AI Intruder Detection software is offered as an option for the latest Dallmeier recording systems. A graphical user interface allows the configuration of the analysis and the calibration of the camera directly in the provided image. Parameters such as the mounting height of the camera or the field of view can be set with a few mouse clicks. The definition of the protected areas is done by simply entering 3D reference points, thus avoiding the time-consuming measurement of the scene with measuring rods.

Function

The SEDOR® AI Intruder Detection software evaluates the detected objects using the defined 3D analysis model, taking into account object size, direction of movement, speed and dwell time in the defined area. The data of the relevant objects are then subjected to classification and verification on the basis of neural networks with the required computing power being provided by a GPU card integrated in the appliance or by an external AI server.

Performance with Dallmeier Network Cameras

The SEDOR® AI Intruder Detection software is designed for the efficient use of video content analysis data from Dallmeier network cameras and Panomera® systems. Since the computing power for the image analysis is already provided on the camera, the appliance is used at a relatively low level of capacity.

Performance with 3rd Party Cameras

The SEDOR® AI Intruder Detection software also supports the analysis of 3rd party video and thermal cameras that do not provide VCA data. In this case, the image material of the cameras is analyzed directly on the appliance. The required computing power depends on various factors such as the resolution or frame rate of the video streams.

Consulting and Planning

The optimal functioning of a high-quality and accurate video analysis system always requires the consideration of a multitude of influencing factors on site. For example, the expected occurrence of relevant events or objects can have a direct impact on the number of video streams that can be analyzed. The required computing power is also strongly influenced by image areas with permanent movements (water areas, green spaces, etc.). Dallmeier offers intensive consultation in the run-up to a project and a variety of options to support the planning of a system.

SEDOR® AI Professional and Premium Package

The SEDOR® AI Intruder Detection software is only offered ex factory for the IPS 10000 appliance. In addition to the required hardware (GPU card or server), the upgrade package includes the license for the use of the SEDOR AI software, which can be scaled as required for individual network cameras or Panomera® systems through channel licenses.

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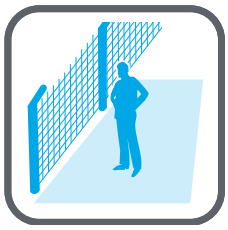
The SEDOR® AI Intruder Detection software[1)] offers a graphical user interface for the configuration of the analysis and the calibration of the camera. Extensive functions allow the simple definition of relevant areas and the exact configuration of the analyses. All in all, these ultimately allow the realization of a wide range of applications, which can be combined as SEDOR® AI Apps.

SEDOR® AI Crossing App

The SEDOR® AI Crossing App issues a message as soon as a person or vehicle crosses a virtual line drawn in the image. The app verifies possible relevant events with a powerful object classification based on neural networks. This allows uninteresting crossings of virtual lines, for example by animals, to be effectively ruled out. An operator is thus less distracted and can concentrate much better on relevant observations.

SEDOR® AI Intruding App

The SEDOR® AI Intruding App allows the definition of protected zones and issues a message as soon as an object enters them. The object type relevant for the message can be defined as a person or vehicle, for example using the neural network to verify the classification. In order to direct the attention of the operators, a pre-zone can be defined for each protected zone allowing an escalation of the messages up to an alarm.



SEDOR® AI Loitering App

The SEDOR® AI Loitering App is optimized for the recognition of persons and evaluates their dwell time in a defined sensitive zone. If the set limit value of the dwell time is exceeded, the observation is verified by the neural network. On this basis, a message is then sent to the operator, whose attention is thus directed to the suspicious behavior of the person.

1) Please note that the SEDOR® AI Intruder Detection software cannot be operated together with the SEDOR® AI Object Counting software on one device. Due to the required computing power for the respective neural networks, a dedicated appliance / AI server is required in each case.

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SEDOR® AI Professional Package	
007370	**SEDOR® AI Professional Package for IPS 10000** License for the use of the SEDOR® AI Software included, license for the use of the SEDOR® AI analysis functions per channel optional, upgrade of an IPS 10000 (with 3× power supplies) by a powerful GPU card, only ex works

SEDOR® AI Premium Package	
008020.401	**SEDOR® AI Premium Package (Tower/2× GTX 1660)** Server package for the analysis of video streams based on neural networks, licence for the use of the SEDOR® AI Software included, licence for the use of SEDOR® AI analysis functions per channel optional, powerful AI server hardware included, only ex works (1× dongle)
008020.402	**SEDOR® AI Premium Package (Rack-Mount/2× GTX 1660)** Server package for the analysis of video streams based on neural networks, licence for the use of the SEDOR® AI Software included, licence for the use of SEDOR® AI analysis functions per channel optional, powerful AI server hardware included, only ex works (1× dongle)

SEDOR® AI Intruder Detection (IPS 10000)	
007372	**DLC - SEDOR® AI Intruder Detection for Single Sensor Camera** License for using the function to detect objects in defined areas and to verify object types based on neural networks for a Dallmeier network camera with VCA support
007730	**DLC - SEDOR® AI Intruder Detection for 3rd Party for Single Sensor Camera** License for using the function to detect objects in defined areas and to verify object types based on neural networks for a 3rd party network camera
007373	**DLC - SEDOR® AI Intruder Detection for Panomera® S/W 4** License for using the function to detect objects in defined areas and to verify object types based on neural networks for a Panomera® S/W 4 system with VCA support, license (007076) for the use of the AI/VCA function on the Panomera® S/W 4 system included
007374	**DLC - SEDOR® AI Intruder Detection for Panomera® S/W 8** License for using the function to detect objects in defined areas and to verify object types based on neural networks for a Panomera® S/W 8 system with VCA support license (007075) for the use of the AI/VCA function on the Panomera® S/W 8 system included

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