SOFTWARE PRODUCTS

1. Analytics modules

1.1. License plate recognition

A software analytical module that detects and recognizes car license plates in the frame (even in difficult weather conditions), saves the recognition result and a screenshot of the car to the database.

- Advantages of our technology:
- The speed of capturing and recognizing the number occurs within 10-40 milliseconds.
- Captivates and recognizes license plates at speeds up to 240 km/h.
- Captures several screenshots with the same number, processes them and chooses the best one. As a result, the user sees the highest quality frame with the car number.
- Simultaneously recognizes all supported license plate templates.
- License plate recognition accuracy is 95 to 99 percent.
- Recognizes license plates of the CIS, the European Union.

1.2. Face recognition

A software analytical module that detects and recognizes a face in a frame, compares it with a standard and saves the recognition result.

- Advantages of our technology:
- Real-time face detection, pattern extraction, and matching against the watchlist database.
- Simultaneous detection of multiple faces or objects in real time.
- Tracking the movement of an object
- Gender classification, age assessment, determination of the main emotions of the face
- Database maintenance
- Support for large systems by connecting up to 10 cameras on one computer and fast synchronization between servers

1.3. Recognition of railway wagons and containers
Allows you to control and register all the cars that enter the territory of the enterprise. The system provides recognition of wagon numbers at the level of 98% in dynamics and statics.

If necessary, you can easily conduct a quick investigation - when the car drove in, how long it was unloaded / loaded and get a photo / video recording of the incident and even the contents of the car.

1.4. Queue detection

A module for counting the number of people in a frame or a given area, a dense human flow (queue length, number of people at the entrance, etc.). Real-time technology determines any changes in the number of people (a person has come or gone). This module can be configured to issue an alarm signal in case of exceeding a certain number of people in a queue or a given zone. It is possible to count the number of people both in the whole frame and in a certain area of this frame. It is possible to set the time interval during which people will be counted. In real time, the system shows the exact number of people in the monitoring area and the time spent by each person in this area. The system detects only people, not counting foreign objects when counting. The counting accuracy is more than 90%.

1.5. Visitor Counting

The data changes in real time. The algorithm detects only people who filter out foreign objects and do not take them into account in the calculation. The system gives the number of people who have entered and left, their difference as of the current moment. The algorithm allows you to calculate the average time spent by a person in a given zone. Our technology allows you to independently configure the entry / exit point, which will be counted, allowing you to increase the reliability of the result. Counting accuracy is not less than 90%. In addition to counting the number of people, the system also provides the entry / exit time and a screenshot of this moment.

Advantages:
-analysis of visitor flows and directions of movement;
-marketing: assessment of the impact of advertising and promotions;
-improvement of personnel work planning and determination of optimal working hours;
-assessment of the influence of the time interval on the visit of customers to the store;
-Detection of high-performance stores and workers.

1.6. Motion detection module

Software module for detecting the direction of movement of an object (person or machine). The technology also allows informing about the crossing of a given line by an object in a prohibited direction. The speed of movement of the object in this case can be up to 200 km/h. The system allows the user to independently specify the boundary and the direction in which this line cannot be crossed. When determining the intersection of a given limit, the system makes a freeze frame, saves it to the database, indicating the time of this event. Information can be issued to external systems.

1.7 Workwear presence control module
With the help of neuroanalytics, the INNI module is able to control the presence of workwear and its individual elements. To do this, just deploy the module in the system and connect a camera to it at the entrance to the room or any convenient area. In addition, the system is able to recognize several people at the same time, which makes it possible to detect violations even when there are crowds of employees, as happens at the entrance in the morning.

1.8 Shelves control
Using a neural network, the system collects data on the filling of the shelves for certain time intervals (depending on the turnover of goods) and signals when the allowable rate is exceeded. In integration with the accounting system, the shelf control module allows you to control balances and manage inventory. The use of this module allows you to reduce costs also by saving the cost of personnel who would have to control the fullness of the shelves. And this is especially noticeable in large supermarket chains. In addition, the system can combine information from all stores in the network, generate reports and send them to mail or other convenient messengers.

2. Integration modules

2.1. Cash transactions control module

The checkout control module allows you to receive all information about cash transactions from checkout servers, synchronize this data with the video stream and search according to different scenarios.

Main functions:

- The titling system allows all receipt data and all POS events to be superimposed synchronously over the video. The system has flexible

settings for the visual presentation of receipt data and cash register events on the screen.
- Smart frames (panel of events by channel) – an additional window on the right side of the frame, which displays all the information from the receipt.
- Search by check and cash server events. You can search by several criteria at the same time.
- “Risk Group Goods” – an operational window for displaying a list of goods to which the operator should pay special attention.
- System of alarm events and scenarios - notification of suspicious events or situations that require special attention.

2.2 Integration with ACS systems

The module for integration with access control systems allows you to receive data from the ACS upon request or event. When an alarm operation of one of the system sensors is registered, the software module enters this event into the database. At the same time, the time, screenshot and video are also stored in the database. A special message appears on the object map, which shows which sensor has triggered, where it is located and which camera is located next to it.

The operator can immediately view a video of the moment the sensor is triggered, as well as view video from nearby cameras. Thus, the system saves video confirmation of all events related to the operation of the access control system.

2.3. Integration with security alarm systems

This module allows you to receive real-time wear data of the intruder alarm. When an alarm operation of one of the system sensors is registered, the software module enters this event into the database. At the same time, the time, screenshot and video are also stored in the database. A special message appears on the object map, which shows which sensor has triggered, where it is located and which camera is located next to it.

The operator can immediately view a video of the moment the sensor is triggered, as well as view video from nearby cameras. This will allow you to quickly respond to alarms from security systems.

The system requires additional confirmation of the processing of an alarm event and does not allow the operator to close the message without making comments on this event.

2.4. Integration with weight complexes

The module allows you to connect to INNI a weight complex installed at the enterprise (road, etc.). At each weighing of the vehicle, weight indicators are automatically transferred to the software package. In addition, at the time of weighing, a screenshot is generated with the indicators of the scales and the weighted vehicle. The video archive is indexed by weighing events, which speeds up data processing. The system compares the values of the scales at the initial and final weighing and displays the difference between the values. That is, as a result, we get three weighing indicators - tare, net, gross with reference to one car. In addition, the system memorizes the net weight of a particular car, which prevents fraud in the future. This greatly simplifies and automates the weighing process.

2.5Integration with RTLS systems

RTLS (shortly from English. Real-time Locating Systems) is a real-time positioning system that provides identification and determination of the coordinates of an object controlled within a given territory. RTLS collects, processes and stores information about the location and movements of people, animals, objects, mobile mechanisms or vehicles.

This information can later be used to monitor various business processes, signal deviations from the established regulations, or to analyze certain processes and situations.

The integration of INNI and RTLS software allows you to link the location of the object of observation to the video data from the camera (group of cameras) installed in a given area and in the field of view of which the specified "mark" falls. This allows you to verify the authenticity of information received from the RTLS system and link certain events to the video archive.

2.6 Integration with barcode and RFID tag readers

This module allows you to receive barcodes defined by the customer's mask (barcode of a product, invoice, employee, rack, etc.). Writes them to the database with reference to the time of reading and puts a mark in the archive. In the future, the user of the system, by the entered barcode, can view the video of the moment of scanning (both from the main camera and from all cameras in the scanning area), as well as track the entire path passed by the barcode (for example, for a parcel, you can view, that it was scanned during sorting, loading into a car, unloading in a warehouse and sending it to storage; all stages will be accompanied by an appropriate video).

2.7 Integration with 1C and other accounting systems

The integration module with the 1C accounting system allows for two-way data exchange between the INNI software and 1C. The purpose of such data exchange is to control the work of employees, identify their possible fraud, as well as automate individual business processes.

The operator has the ability to configure the system's reactions to certain data that will be received from 1C (for example: do not open the gate for a specific car until its number is linked to the paid invoice; check debtors entering the parking area in the database; show video confirmation unloading goods from a specific consignment note, etc.).

Working with this software module helps to identify fraud with documents (for example, according to the documents, the goods were accepted to the warehouse, but in fact they were not even delivered).

2.8 STOP

- Operational monitoring of the situation at the facility at night, registration of alarms around the perimeter and in the protected area
- Online access to archival materials of subordinate SVN systems
- Monitoring the status of system hardware
- Maintaining an automatic log of alarm events and its analysis using reports
- Acquisition of video/photo data confirming the alarm
- Automation of personnel activity control
- Monitoring the attention of security system operators at night.