

SINGLE SOFTWARE SOLUTION FOR ALL EQUIPMENT

VideoNet – PSIM class security platform

Centralized monitoring and comprehensive management of security systems

- Unites all security system devices into one complex
- Organizes convenient monitoring of the object
- Securely preserves video evidence
- **Detects and reports alarms**
- Quickly finds the desired event in the archive

More than 150,000 customers across worldwide 25 years experience in security solutions market



A SECURITY PLATFORM WITH ARTIFICIAL INTELLIGENCE

VideoNet is a Russian PSIM class security

for centralized monitoring of a facility and integrated management of security systems: video surveillance system, access control, security and fire alarm, perimeter security. Uses modern analytics and artificial intelligence to create an effective system for responding to incidents with various scenarios. Provides a complete information picture of events for decision-making and prompt investigation of incidents.

The most modern technologies are integrated into the platform for incident detection:

- **7** Face recognition
- Licence plate recognition
- Multifactor identification
- Biometric identification
- Intelligent perimeter protection
- Artificial intelligence for thermal imaging equipment
- Neural networks trained to recognize objects

The platform has an increased level of security and has functionality to protect against interference and damage from third parties:

- Specialized data storage format
- Archive access protection
- Software protection of access to the system
- Hardware protection of access to the system
- Multi-level access rights to functionality and data

The platform has functionality to protect video evidence from forgery.

A special data recording format prevents tampering and modification of video evidence.

VideoNet unites:

- Video
- Audio
- ACS
- FIAS
- Perimeter security
- Control and accounting and banking equipment
- Industrial equipment



Connect to VideoNet:

- IP video cameras
- ACS Controllers
- FIAS devices
- Cash registers and money counting machines
- Banking equipment
- Perimeter security devices
- DVRs
- Cameras of AHDM, 960H standards
- Microphones

SINGLE SOFTWARE SOLUTION FOR ALL EQUIPMENT

VideoNet PSIM works for your goals

VideoNet PSIM is a new opportunity and approach to organizing a security system.

We have created a software environment that will combine ACS, FIAS and video equipment from different manufacturers in one software. You control the operation of all systems and each individual device using VideoNet and get a complete picture of what is happening at the facility.

Integration within one VideoNet software is a common logic for managing the security process, combining and supplementing the capabilities of all connected devices.

Informativeness and controllability - these two slogans are embodied in the PSIM concept. VideoNet PSIM, unlike a video surveillance system or a conventional integrated system, provides a complete picture of the events occurring at the facility and provides the entire set of data for decision-making and full-function management.

Main distinction of the VideoNet PSIM system

COMPATIBILITY with equipment from various manufacturers. VideoNet PSIM provides flexibility for growth and reduced implementation costs using already installed equipment.

SITUATIONAL AWARENESS. The overall picture is made up of a variety of data from various sources: video cameras and recorders of any standards, ACS controllers, FIAS devices, microphones, data from perimeter sensors, industrial equipment, cash registers, banking and other external systems - united by a common information environment.

ECONOMICAL SOLUTION. The functionality is selected individually according to business needs. The principle of modularity - pay only for the functionality that is needed, get more benefits from the security system, and reduce the cost of maintaining the system.

EFFECTIVE SOLUTION. It multiplies the possibilities of detecting various alarming events, complements and enriches the security process with information and complex reactions to the onset of alarming events. You get the most out of using the security system, you can quickly make the right decision and effectively respond to an alarming event.

VIDEONET PSIM WITH ARTIFICIAL INTELLIGENCE



The use of artificial intelligence in the PSIM approach to building a unified security system at a facility allows you to create unique solutions that significantly increase the level of security of any facility. Artificial intelligence is used in all subsystems: Video surveillance, ACS, FIAS, perimeter security system.

Deep learning neural networks recognize types of objects and allow to solve problems that cannot be solved using traditional means. Artificial intelligence, capable of recognizing faces and licence plates, allows to effectively detect violators under changing external conditions. It can be used as an element for multi-factor identification in conjunction with an access control and management system. The use of artificial intelligence in the operation of a perimeter security system will not only reliably determine the presence or absence of a person in the intrusion zone, but will also be able to identify him using a biometric database.

Thanks to the use of PSIM technology with artificial intelligence, the interaction of classical elements of security systems (FIAS sensors and devices, ACS and perimeter security equipment, as well as neural networks and deep learning technologies) allows for an unprecedented increase in the likelihood of detecting and identifying an intruder. Ensure facility safety at a new **UNSURPASSED** level!

VIDEONET PSIM SOFTWARE HAS THE FOLLOWING FEATURES:

- Collects data from any number of devices in a single system
- Analyzes and compares data, events, states, and signals
- Identifies alarming situations and sets priorities
- Informs the operator in a convenient form about the event and helps to make an informed decision
- Prepares reports and performs post-analysis
- Controls the operator and his time of interaction with the system

Programming standard operating procedures helps the operator accurately act according to the situation and respond to potential threats.

VideoNet PSIM is a flexible and intelligent solution that takes care of the security of your business, property, employees and clients, and is cost-effective, grows and develops with your tasks and needs.

Center for control and management of facility security systems

VideoNet PSIM allows you to organize unified situation centers - powerful complexes for monitoring and managing protected objects of any level of complexity, including geographically distributed objects.

All information from system equipment - video surveillance, ACS, FIAS, perimeter security, industrial automation, external systems - is supplemented with data from built-in analytics modules, consolidated into a single monitoring and control center and displayed on the screens of operators' workplaces. The entire system, regardless of its scale and equipment used, is controlled from one or several workstations.

The advantage of building a comprehensive solution on the VideoNet PSIM platform is the use of built-in video and audio analytics. Intelligent video and audio detectors automatically identify suspicious and dangerous events and draw attention to important incidents.



The advantage of the VideoNet PSIM platform over the integrated centralized systems is the direct integration of all devices into a single centralized information space within one system. VideoNet PSIM creates the big picture by connecting data and events from multiple devices, linking these events to each other, supplementing them with video and audio analytics, thereby providing complete situational awareness and control to the operator.

The logic of the VideoNet system, configured for the occurrence of various events from FIAS sensors, ACS and video surveillance equipment, microphones, detectors, recognition modules, cash registers, industrial equipment, allows you to select different options and scenarios for reactions to events depending on the specifics of the object, the requirements of the security service, work schedules and other criteria.

Convenience, visibility and automation of frequently used actions

Operator efficiency when working with large volumes of data is increased by reducing the number of actions. For a quick response and maximum operator awareness, alarm monitors (SPOT channels) can be used, which automatically display images from cameras where the most important events occur.

Combining various sources of information in one interface allows the operator to make an informed and prompt decision

A mobile application installed on smartphones and tablets of company managers and security services allows to remotely monitor the situation and constantly be aware of what is happening at the site, receive notifications about important events, remotely view cameras, video archives, event logs and issue commands.

Accurate and prompt decision making and incident investigation

Quick provision of the necessary information from the archive using various reports and a built-in video analytical search system helps resolve controversial situations, investigate incidents, study in detail and analyze the accumulated information.

The effectiveness of a PSIM class security system is increased due to:

- Use of a single VideoNet interface for rapid operator response to incidents;
- Full processing of data coming directly from the equipment and supplemented by the results of video and audio analytics;
- The use of neural network detectors, the accuracy of which is not affected by weather conditions and light levels;
- Automatic tracking of potentially dangerous situations and responding to them;
- Pre-configured scenarios that regulate the operator's actions when various events occur;
- Displaying ongoing events from all devices in video windows, on graphic plans and in the event logs;
- Direct control of all actuators of the system in automatic and manual mode.

WORKING WITH VIDEO

Relieve the operator from routine tasks, improve the quality of security

The VideoNet platform automatically informs the operator about the occurrence of alarming events, attracts attention and minimizes reaction time.

The effectiveness of a video surveillance and security system directly depends on the automation of work with a huge flow of homogeneous information, from which a person quickly gets tired and loses vigilance.

Automatic reaction to events

VideoNet will generate automatic reactions, inform and warn about the occurrence of alarming events and allow the operator to make an informed and prompt decision.

The user can configure automatic reactions to events from the Video surveillance system and from other security subsystems: ACS, FIAS,

The VideoNet platform reacts to any event from the event log, a change in the state of devices or an event from a device, an event from an external system or an event from a recognition system, the triggering of a detector or a response to a user command and performs the selected action.

You can set up a complex response to the occurrence of several events.

Each task is a combination of events that can occur and the reactions that the VideoNet system will perform in response to



Create your own system behavior model

Define automatic actions for various events. Create tasks in VideoNet.

Choose different settings, such as office opening hours, and different options for responding to events during business hours, weekends, and after hours.

Automate security processes

Set up reactions to the occurrence of various events: from security and fire detectors (sensors), access control and management devices, microphones, detectors, POS devices and other external devices.

Enable or disable recognition module

Starts or stops the licence plate or face recognition module.

Start video/audio recording

Video/audio recording will start or stop according to the selected

Enable detector

The detector for the selected camera or one of its presets (zone, sensitivity, size of detected objects) will turn on.

Send command

Sends a command to the device, guarding partition or the entire system to change state. It will automatically arm or disarm a system element, reset an alarm, and for relay devices it will execute a command to close/open the outputs.

Will open a passage, unlock or block passages and doors, and perform emergency closing or opening of doors.

Vehicle access gate point

Will open the passage, unlock or block the access gate point, perform emergency closing or opening of the barrier.

Anti-passback rule

Resets anti-passback.

Security and fire alarm

Will arm or disarm sensors and reset the alarm.

Perimeter security system

Will arm or disarm sensors, reset alarms, reset tamper alarm,

Relay board

Closes or opens the contact.

Start patrol/preset

Will run a specific preset or patrol program for the selected PTZ

Will display the message specified in its settings in the event log.

Uses the Analytics environment report template, saves the report to disk or sends it by email to the specified addresses.

Message titration

Outputs a message specified in the settings on the video image from

Show a message on the events panel

Sends a message to the event panel.

Sound message

When a certain event occurs, a sound file will be played. The sound file can be played on the Operator's workstation, network cameras and IP speakers. You can adjust the number of repetitions and pauses between repetitions.

Select screen mode

Automatically switches to the specified screen mode (change in the number of cameras, full screen, output to a spot monitor/video wall).

Positioning on the graphical plan

Opens the screen mode with a graphical plan and performs positioning on the alarm element.

Capture frame

Saves the image from the camera to a file and sends it by email.

Start archivation

Automatically starts archiving records.

Retrieve data from the source's internal memory

Copies an archive from a video recorder (DVR, NVR) or from the internal memory of a video camera.

Run application

Will launch any executive file (*.exe) on the computer.

Sending an email or SMS message

An email message will be sent to the specified addresses or an SMS message with the specified text will be sent to the specified phone

GRAPHIC PLANS OF OBJECTS

Navigation tool for convenient monitoring and management of site security

The use of graphic plans allows you to combine a large number of different surveillance, PSS, FIAS, ACS equipment into a single whole and provide the most complete and informative picture of events at the facility.

A practical and intuitive approach to monitoring.

The graphic plan displays events, alarms, device status, and video from surveillance cameras in real time. When an alarm occurs or the status of devices changes, the display of icons on the graphic plan changes. This makes it easy to detect an incident.





Management of the entire security system from graphic plans.

The operator controls the entire object from the graphic plans window, simultaneously monitors specific access points or access gate points, receives video from the alarm site, and sees the event log of the entire security system.

The operator controls all security system devices directly from the site plan and can perform an action with one click on the icon on the plan. From the graphic plan, you can start an emergency recording on the desired camera, enable audio broadcast from a microphone, arm or disarm the device, close/open a relay, cancel an alarm, control ACS and FIAS devices, watch the broadcast on the selected camera.

A tool for monitoring distributed and complex objects.

Creating multi-level plans of an object with varying degrees of detail simplifies monitoring of the object, increases information content, gives full control of the situation and a quick response to incidents. Convenience of work is achieved by linking different levels of plans to each other. Various levels of nesting of plans allow you to see the general situation and detail: by buildings, floors, rooms, etc.

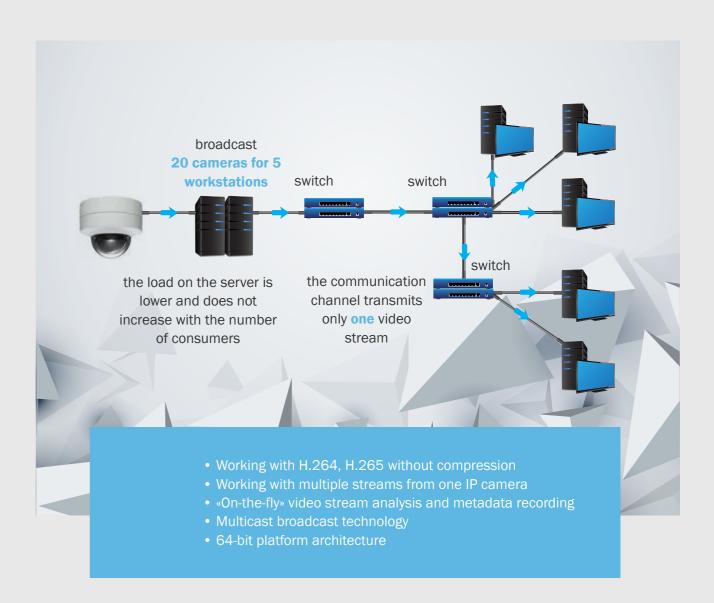
Site plans are scaled. When scaling changes, devices are grouped into one cluster. When an alarm event occurs on any device in the cluster, the indication will change. Pre-configured scenarios for reactions to alarm events regulate operator actions, and individually configured user commands reduce response time to events.

Save computing resources

The VideoNet platform manages a large number of video cameras and provides effective monitoring of a protected facility.

The use of VideoNet technologies when building large and complex video surveillance systems provides significant savings and rational use of hardware resources of video stations and reduces the load on the network infrastructure. Selecting different settings, for example, office opening

hours, and different reactions to events during working hours, weekends or after the office closes, allows you to more flexibly configure security functions taking into account the company's business processes, recording and storing only relevant information.



The use of Multicast broadcasting technology will reduce the load on communication channels and network equipment by reducing the number of transmitted streams. The video stream is not

duplicated and is transmitted once to certain subscribers (operators). Distribution between subscribers occurs on the last common switch.

VIDEO SYSTEM

Manage the video, get a complete picture of the events

For convenient monitoring of an object, create individual screen modes for the operator's tasks, place devices on multi-level graphic plans, and select the sequence for displaying cameras on the screen.

To obtain evidence of violations, use the overlay of captions on the video sequence. You can titrate any event; for example, events from an access control and management system can be superimposed on the video from the camera responsible for the access point.

VideoNet will automatically generate reactions to various alarming events, immediately warn and inform about the incident in real time without direct human participation.

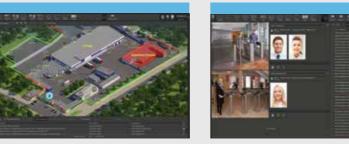
Use VideoNet, monitor video cameras, record and play back data, detect video or audio data from cameras and microphones. Manage relays, security sensors and telemetry. Organize interaction with external systems, security and fire alarms, access control and management systems, perimeter security systems, and industrial equipment.















It is easy to scale the system by adding any amount of hardware.



Centralized storage, remote viewing and archiving of video data.



CONVENIENT SURVEILLANCE

> Simple management of the process of monitoring and guarding an object.



Information content and visual control of the situation and quick response.



VIDEO ANALYTICS

Effective detection of alarming events and incidents.



WEB ACCESS

Remote access to the video surveillance system from anywhere in the world.

Pay attention to an important event

NEURAL NETWORK OBJECT **TYPE DETECTOR**



A neural network object type detector will determine the type of object in the camera's field of view: person, car, etc.

NEURAL NETWORK QUEUE LENGTH DETECTOR

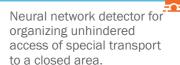


The neural network queue length detector will detect a cluster of objects of a given type in the camera control area.

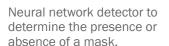
NEURAL NETWORK DETECTOR OF PERSONAL PROTECTIVE

The neural network detector automatically detects whether employees are wearing PPE.

NEURAL NETWORK DETECTOR OF SPECIAL TRANSPORT



NEURAL NETWORK MASK DETECTOR



NEURAL NETWORK WEAPON -DETECTOR

The neural network weapon detector is designed to detect firearms.

NEURAL NETWORK SMOKE AND FIRE DETECTOR



A neural network smoke and fire detector will detect sources of smoke and fire in a protected area.

FACE **DETECTOR**



The face detector detects people's faces, counts them and stores them in the system database.

DIRECTION **DETECTOR**



The direction detector detects objects moving in a given direction.

LINE CROSSING **DETECTOR**



The line crossing detector distinguishes between two events: approaching and crossing a line

FIRE DETECTOR



The fire detector will detect fires in the protected area.

SOUND



The sound detector determines acceptable levels of volume and duration of extraneous noise.



The motion detector detects the movement of objects in the camera's control area.

ABANDONED OBJECT **DETECTOR**



The detector detects abandoned or missing items.

ADAPTIVE OBJECT DETECTOR



An adaptive object detector avoids false alarms.

COUNTER



The object counter automatically records the number of objects in the camera's control area.

SMOKE DETECTOR



The smoke detector will detect smoke in the protected area.

SABOTAGE



The sabotage detector responds to malfunctions and emergency situations with cameras.

Intelligent and neural network detectors

The VideoNet system implements intelligent and neural network detectors that automatically detect and respond to suspicious and dangerous events.

For each camera, you can create several combinations of different detectors, different combinations of detection zones with individual parameters for each of these zones.

The use of neural networks in video surveillance opens up enormous prospects and areas of application for this technology: from retail to "Safe City" solutions. For the security systems industry, this is a major leap in the development of situational analytics - a transition from assumptions based on mathematical analysis to pattern recognition. A step to specifics and an unambiguous answer it was precisely a crowd of people, or it was a person on the rails, or it was a truck that drove up to the gate. The use of neural network technology is useful in solving the problem of searching and analyzing information when analyzing incidents. The ability to sort by object classes will reduce time and allow you to get more accurate results.

Training neural networks for customer tasks

Using the new functionality of our system, we can adapt neural network training to specific requirements and requests. This service will allow you to configure the VideoNet security system so that it successfully identifies and recognizes the objects that are most important to your business. The neural networks we use have high accuracy and quality of information perception for pattern recognition. This ensures that we create a unique product that solves your individual problems. And the ability to connect new neural networks to a running system without reinstalling it simplifies and speeds up the process of integrating new functions into your system.

The learning process is highly personalized and we work closely with our clients to understand their specific needs and goals. We can use a wide range of data sources, including video footage, images and other data, to train our neural networks to recognize and respond effectively to certain events or conditions.

Additionally, our trained neural networks can adapt to changing conditions and environments, ensuring reliable and accurate performance in real-world scenarios.

NEURAL NETWORK OBJECT TYPE DETECTOR

Identifies and classifies objects



Provides unambiguous identification of the following types of objects in the frame: person, car, bus, truck, motorcycle, bicycle, boat, dog

High reliability of determining these types of objects is achieved by integrating a unique neural network into the detector algorithm. The accuracy of object type recognition is not affected by weather conditions, changes in time of day, lighting, etc.

A distinctive feature of the neural network detector is the ability to work with PTZ cameras in patrol mode.

This detector can be used to prevent violations of parking rules, warn of the appearance of a person in a dangerous area, and other cases in which the reliability of determining the type of object plays a significant role.



NEURAL NETWORK QUEUE LENGTH DETECTOR

Defines a queue of selected object types



The queue length detector reacts to the accumulation of selected types of objects in the observed area.

The detector uses an object type recognition algorithm based on convolutional neural networks. The use of a neural network allows categorization by types of objects. The neural network detector can be configured to detect a queue of the following types of objects: person, car, bus, motorcycle, bicycle.

The detector is useful for organizing the work of personnel at various service points for people and equipment (shops, customs terminals, parking lots, etc.). The detector is in demand among transport and logistics enterprises, in trade and in areas where it is necessary to obtain information about the accumulation of detected objects.

Based on the results of the detector's work, it is possible to correctly organize the space in retail outlets, competently schedule the employees of the enterprise, optimize the management of traffic flows, etc. Detection of several objects of a given type in the camera control zone and their presence at one point in the frame for more than a certain time will be recorded by the detector as the formation of a queue.





NEURAL NETWORK MASK DETECTOR

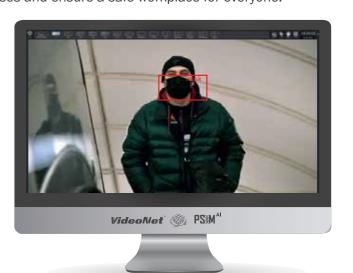
Monitoring compliance with established rules when visiting the site



A neural network detector for determining the presence or absence of a mask is an innovative solution that helps to identify violations of sanitary and epidemiological requirements in public places. In addition, the detector can be used to identify and detect intruders who want to hide their face under a mask.

The functionality of a neural network mask detector is especially relevant for medical institutions, pharmacies, etc. It can be used to monitor compliance with established rules when visiting a facility and informs about the lack of personal protective equipment on the face of employees and visitors. This is necessary to prevent the spread of infectious diseases and ensure a safe workplace for everyone.

The neural network mask detector works based on an algorithm that detects people in the image from a surveillance camera and determines the presence or absence of a mask on the person. The system automatically records the presence or absence of a mask and alerts the relevant services about violation of the rules established at the facility.



Automatically detects whether employees are wearing a vest, helmet and goggles together or separately



A neural network detector for identifying personal protective equipment can be used as part of a video surveillance system or as part of a solution for controlling employee access to the territory of the enterprise and to certain areas.

and to certain areas.





The solution can include checking for the state of alcohol intoxication of personnel and non-contact measurement of a person's temperature.

This functionality is in demand by enterprises and construction companies, which suffer multimillion losses due to safety violations, and their employees are injured. The detector can be used for early detection of safety violations, for systemic detection of violations, and in complex work with other neural network detectors that determine the presence of people and equipment in a dangerous area.

NEURAL NETWORK WEAPON DETECTOR

Reducing the risks of using firearms in public places and social institutions



The neural network weapon detector is designed to detect firearms. The detector finds objects similar to firearms in the image from a video surveillance camera and, in accordance with the specified settings, notifies the operator, security service or law enforcement agencies about this. When the authenticity of the event is confirmed, appropriate measures are taken.

A neural network firearms detector can be used as part of an analytical detection and information complex, which provides a comprehensive solution to the following security problems:

- Physical restriction of access for outsiders (fencing the territory);
- Application of access control systems;
- Interaction with security and fire alarm systems;
- Application of a perimeter security system;
- Use of a video surveillance system;
- Use of recognition systems and situational analytics.







NEURAL NETWORK SMOKE AND FIRE DETECTOR

Detects sources of smoke and fire

The smoke detector will provide warning of a fire, ensure timely notification of personnel and response of security systems to the occurrence of an emergency at the facility.

The use of a detector will be useful at sites where it is impossible to install a fire alarm system. For example, in parking lots, in enterprises with a large territory, or for quickly detecting fires in open spaces. Using a detector will reduce the time to detect a fire and ensure a quick response from the operator.



NEURAL NETWORK DETECTOR OF SPECIAL TRANSPORT

Unhindered passage of special vehicles



The solution is relevant for management companies and homeowners associations to comply with the requirements for unhindered access to the territory of special services and to minimize the time they pass through the barrier.

The neural network detector, used to organize unhindered access of special vehicles to a closed area, allows you to automate the process of allowing specialized vehicles through without the need for operator participation or adherence to a schedule. This system provides fast information processing and instant response to the detection of such vehicles.





An important aspect of a neural network detector is the system's ability to recognize and distinguish special vehicles from ordinary ones, which is especially useful in emergency situations where every second matters. Thanks to the use of a neural network, the system is able to accurately detect the presence and type of specialized transport, such as an ambulance, fire truck or police car, and automatically open the barrier without the need for operator intervention.

VIDEONET IN THE REGISTER OF THE UNIFIED DATA STORAGE AND PROCESSING CENTER

The new functionality of VideoNet PSIM allows users to transfer information from surveillance cameras to the state information system "Unified Data Storage Center".

VideoNet has implemented a connection to the ECHD by the second type, when the video archive is stored directly on site. IP cameras are connected to a server with VideoNet software on site, and the server is connected to the ECHD.

Users of the ECHD system are the Ministry of Internal Affairs, the Ministry of Emergency Situations, city government services, and Moscow residents. In the future, after the modernization of the ECHD data center, the transfer of information from video cameras installed in other regions will be implemented. Such centralization will reduce the load on the criminal search system.



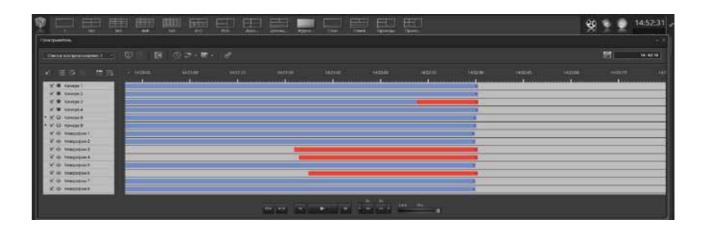
All users of the ECHD system have access to an archive of video recordings and video information received from surveillance cameras in real time. Now two thirds of offenses in Moscow are investigated using city surveillance cameras.

HIGH-QUALITY SOUND RECORDING

To record conversations, VideoNet PSIM uses its own development - network conversation recording modules PowerVN4-AudioIP and PowerVN8-AudioIP, to which you can connect from 4 to 8 external microphones or intercoms. The module has an Ethernet interface for connecting to a computer network. The registration module provides high-quality recording of conversations without compression (PCM standard) and is used to solve a wide range of tasks: increasing the efficiency of staff and the level of customer service, conducting incident investigations, minimizing the risks of leaking confidential information, and identifying facts of corruption.

Sound recording is carried out directly in VideoNet. Storage of the audio archive is not limited in time and depends only on the settings selected by the user. The user can listen to sound for any selected period and simultaneously view video cameras from the scene.

Using intelligent archive search, you can quickly analyze a huge amount of video and audio information, quickly and effectively investigate incidents, resolve controversial situations and conduct a detailed study of the accumulated information.



Face recognition module

The solution based on VideoNet PSIM combines various identification methods - from conventional access cards to biometrics, built-in video, audio and neural network analytics, data from video surveillance systems, ACS, FIAS, PSS.

PSIM technology allows you to use any

combination of data for multi-factor identification. Thanks to this approach, it is possible to determine the presence of employees in the premises without using an access control and management system, and when a fire and security alarm is triggered, inform about the presence of employees in the premises. This way of organizing the operation of security systems makes it possible to build intelligent and complex scenarios for detecting alarms and automatically responding to them.

Use multi-factor identification and a unique PSIM approach to increase the level of security at the facility



In VideoNet PSIM, the built-in face recognition module can be used both to solve traditional problems - access control or detection of offenders, and to implement unique and individual solutions thanks to the PSIM concept.

Operating principle of the built-in face recognition module

In real time, the module analyzes the image, automatically finds the optimal face image for recognition, saves the image, compares it with reference images in databases and produces a recognition result.

When VideoNet PSIM recognizes an offender, it automatically sends a message to the police or security service about the appearance of an object in the protected area. This functionality is in demand in crowded places - train stations, stadiums, airports, subway, etc. The module is used to automate the face control process in banks, stores, hotels, to identify VIP clients, staff or violators.

A solution using biometric data on VideoNet PSIM will increase the level of security of military, government facilities, fuel and energy facilities, factories, public facilities, transport facilities, stadiums, banks and shops.

The convenient and intuitive VideoNet PSIM interface allows the operator to:

- See the result of comparing the faces detected in real time with the saved face databases
- Automatically inform response services about the appearance of a certain person in the control zone
- Receive alarm notifications in the form of a sound alert, images from the camera on the alarm monitor, a message on the event panel, e-mail, SMS notifications, etc.
- Search for people in the archive using specified parameters: photo, age, gender, time and date.
- Manually create a database of faces for access to the facility or premises
- · Create new databases based on previously detected faces
- Generate reports

ACCESS CONTROL TO THE FACILITY BY FACE RECOGNITION

Collaboration between the face recognition module and the access control system:

- Automatically grants access to premises based on the result of facial recognition.
- Guarantees access to specially protected areas only to authorized persons.
- Uses the result of face recognition as the main or additional identifier of the ACS (card + face, face).
- Prevents illegal entry into a facility and helps in finding intruders.
- Detects strangers on the territory and generates alarms in real time.
- Keeps track of working hours and controls the movement of employees around the facility.



The face recognition module in VideoNet PSIM is a full-fledged element of the access control and management system. Access to the facility can be organized in identification or verification mode.

Control of vehicle passage to the enterprise territory

A solution for controlling the passage of vehicles into the territory of an enterprise, warehouse or residential complex, customs terminal or business center, parking lot or closed area.



VideoNet allows you to create flexible programming of system operation scenarios and various ways to inform the operator. There is a function for manually entering a licence plate by the operator and recording this fact in the event log with the operator's data, checking the licence plate in the database of allowed licence plates and opening the barrier.

Flexible configuration options allow you to organize the work of the checkpoint for each object individually. To allow visitors' vehicles to enter the territory, you can add vehicle licence plates in advance to the database of those allowed for entry and set up an individual schedule for them. VideoNet will provide the ability to configure any reaction available in the system to the recognition event of all licence plates of vehicles crossing the control zone.

As part of building a unified security system and reducing the costs of organizing business processes at an enterprise, the VideoNet platform has implemented a vehicle licence plate recognition module. To optimally solve problems related to vehicle licence plate recognition (taking into account the speed of movement, the requirements for illumination in the control zone, the type of television equipment used and the location of its installation), you can select the recognition subsystem that provides the greatest economic efficiency.



The licence plate recognition module performs:

- Automatic recognition and registration of licence plates.
- Saving the licence plate in the database indicating the date, time and direction of movement.
- Video recording of travel events. Playback based on a selected event from the log.
- Automatic comparison of the car number with databases and issuance of a corresponding message to the operator.
- Automation of access control, management of access control devices, barriers.
- Searching the database by number, date, time, recognition result, direction of movement.
- Titration of recognized licence plates.
- Informing about travel events via SMS, e-mail, saving a frame, sound signal, etc.

The VideoNet event log stores events for all vehicle passages. In VideoNet, you can generate reports on the facts of vehicle entry and exit, by date and time, recognized or not recognized license plates, license plates manually adjusted by the operator, access gate points, events, and the time the vehicle was on the territory.

VideoNet PSIM organizes the joint operation of the vehicle licence plate recognition system and ACS. You can:

- Link vehicle data with data about a person to record his passage to the territory based on the vehicle's passage;
- Organize vehicle passage based on double verification. A scenario where a vehicle will be allowed to enter a facility subject to licence plate recognition and positive identification of the driver using an access card.

The joint work of the licence plate recognition module and the access control and management environment in VideoNet PSIM allows you to fully automate the process of vehicle entry. You can set up a schedule by day of the week, taking into account employees' work schedules, and use recognition of an employee's vehicle licence plate as a parameter for recording the working hours of employees whose work involves traveling.

Organize access control individually for your facility

Within the framework of the VideoNet PSIM platform, a modern, fully functional access control and management software environment is implemented - VideoNet ACS.

VideoNet ACS controls, limits access, makes reports, prevents manipulation of access cards, and provides evidence of violations of discipline.

Using a video surveillance system in conjunction with access control systems increases information content, expands the functionality of the access control system and creates an evidence base.

You set the rules - who should be allowed into what rooms, what to block, determine which room a person is in, control the movement of employees and make various reports.

Using the VideoNet ACS interface, you can:

- Connect access controllers from various manufacturers.
- Control various actuators: electromagnetic and electromechanical locks, turnstiles, card readers, barriers.
- Use any convenient access identifiers: Touch Memory keys, proximity cards of various standards, biometric data.
- Use various data exchange protocols between elements: RS-485 and Ethernet.

Connecting and managing ACS devices directly to the VideoNet platform allows you to combine controllers from different manufacturers, manage them and, most importantly, create unified complex access rules, including the ability to use various sliding schedules, exceptions for holidays and weekends, and an unlimited number of time zones. In the VideoNet ACS environment, special algorithms for data synchronization between all controllers are used, ensuring the implementation of uniform access rules regardless of the specific type and manufacturer of each controller, and the actual expansion of the characteristics originally built into the controllers.

The use of VideoNet ACS, depending on the task, makes it possible to flexibly organize specialized workstations:

- CHECKPOINT WORKSTATION to provide visual and video verification of passages to the facility.
- PASS OFFICE WORKSTATION for working with passes and access rights to an object.
- **HR WORKSTATION** to improve labor discipline.
- **SECURITY OFFICER WORKSTATION** to monitor the status of system devices and effectively respond to emergency situations.

Moreover, each of the created workplaces can be expanded by using data from other VideoNet PSIM software environments and any devices and external systems connected to the common system, monitoring and managing which can be

effectively carried out through the interface of interactive graphic plans.

Advantages:

- Support for various controllers
- Combining different controllers into a single access system
- Expanding the functionality of controllers
- Visual, detailed reports
- Interactive graphic plans

Access rules:

- Schedules/work modes
- Creating and managing user groups
- Creating and managing device groups

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Work time logging system

The VideoNet ACS allows you to keep records of the working hours of employees of the enterprise, monitor their presence, absence, lateness and overtime.

A variety of reporting forms reflect the actual work schedule of employees and help establish the volume and causes of lost working time. Reports can be generated by selected dates, employees, departments or the organization as a whole. Convenient exporting of main reports in pdf, xls, html, rtf formats makes it possible to further use them outside the VideoNet work time logging system.

To set up a work time logging system in the VideoNet system, a convenient functionality has been developed that fully automates the process of recording employee working hours using access cards. You increase the level of safety in your company and the discipline of workers. The use of this functionality is especially important in organizations where employee salaries depend on the amount of time worked.



"Who was in the room" analytical report

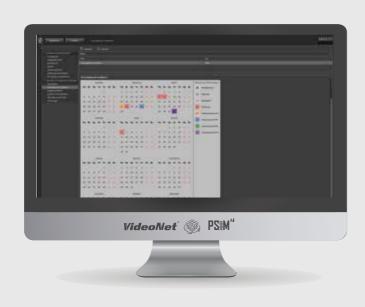
Get information about the presence of employees in a particular room during a certain period of time.

"Movement of employees on the site" analytical report

This type of analytical report allows you to analyze the movement of employees within the enterprise.

«Working time» analytical report

The working time report shows the intervals of the employee's presence and absence from the workplace for each day of the reporting period, as well as the working time credited to him for the day.





«Overtime» analytical report

The overtime report shows a list of all employee overtime and their duration for each day of the reporting period .

«T13» analytical report

The report on form T-13 is a timesheet according to the unified form T-13. The timesheet contains notes on employee attendance and absence from work by day of the month.

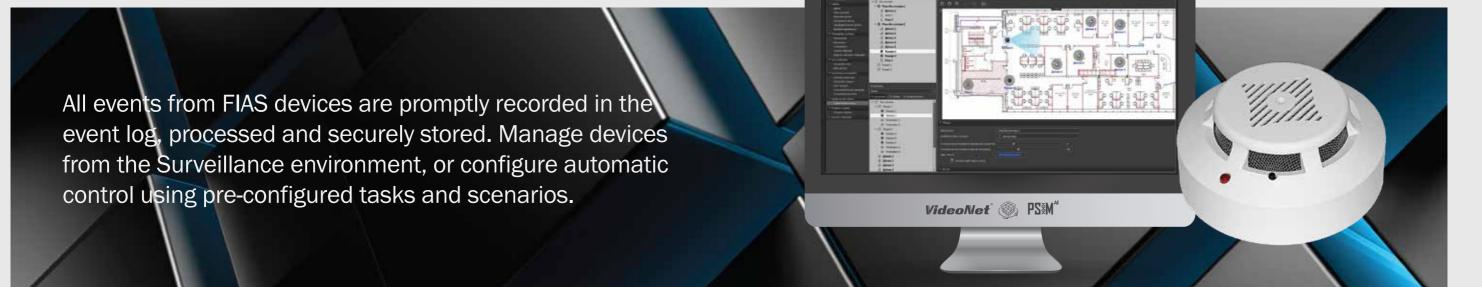
«About violations» analytical report

Shows a list of all violations for each day of the reporting period.

Connect and control FIAS devices

Within the framework of the VideoNet PSIM platform, a modern full-featured software environment for organizing a fire and security alarm system has been implemented - VideoNet FIAS.

Connect fire and security alarm (FIAS) devices directly to VideoNet software.



Using the VideoNet FIAS software environment provides:

- Connecting FIAS control devices.
- Configuration of all system elements: loops, zones, partitions and access rights.
- Monitoring and displaying the status of zones, address modules and devices, reception and control devices on the premises graphic plans.
- Automatic and manual control of the operation of all connected elements.
- Logging of all events occurring in the system.

The operator can conveniently control FIAS devices directly on the graphic plan of the facility. The use of multi-level graphic plans of an object simplifies monitoring of the object, increases information content and allows you to simultaneously see the state of all devices located on the plan and easily manage them - each individually, or in groups and sections. VideoNet informs the operator with the help of indications about the alarm and the status of devices located on the plan and makes it easy to detect an incident.

What using FIAS in the VideoNet platform provides

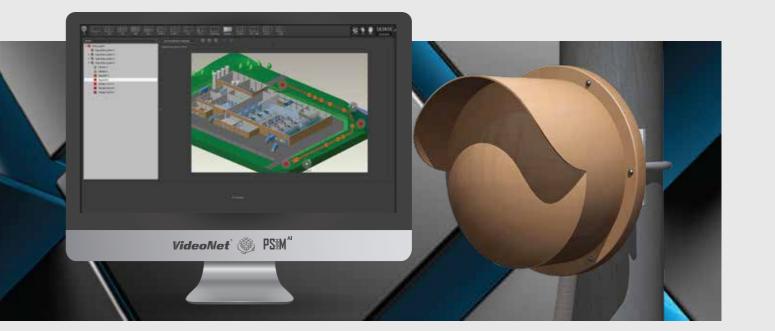
- VideoNet manages settings and processing of standard operations (arming/disarming partitions and zones, processing alarm messages, triggering reactions).
- VideoNet expands the number of reactions through the use of customizable commands and reactions
 to the occurrence of events from security and fire detectors (sensors). This gives a large number of
 various reactions for any devices or subsystems connected to VideoNet.
- VideoNet provides a solution where there was none. For example, when a security alarm sensor is triggered, in addition to the standard "Turn on siren" response, you can configure the camera to rotate to a specified area, send a message, sound signal, and much more.
- VideoNet increases information content. The problem of false positives always exists. An alarm event
 will be a complex event, confirmed by alarms from various sources, and with configured trigger
 parameters and video verification for the operator or security guard.
- VideoNet reduces the influence of the human factor on the security process. Customizing the behavior of the system automates a large number of processes and eliminates human errors.

Centralized monitoring and rapid response

As part of the global unification and management of security system equipment, the connection of perimeter security system equipment has been implemented in the interface of the unified VideoNet platform.

For convenient operation and prompt response of the security service, all devices are placed on graphic plans. VideoNet allows you to manage perimeter security devices directly from the window of graphic plans: arm and disarm segments and perimeter sensors, receive information about the status of devices located along the perimeter (alarm on a segment, alarm on a sensor, break-in, etc.)

To integrate perimeter security system devices into VideoNet, the Total.PSS platform has been added. The platform allows you to add perimeter security system devices to the VideoNet configuration and configure their parameters. VideoNet allows you to divide the perimeter security cable into segments up to 1 meter and configure the joint operation of video cameras and the perimeter security system individually for each segment.



In the VideoNet system schedule, it is easy to create automatic system reactions to intrusion events and organize informing the security service in various ways.

With this method of interaction, perimeter security devices provide information about the type of event and the place where it occurred on the security service monitors, linked to the site plan and supplemented by images from video cameras from the alarm site.





VideoNet records from video cameras, saves all events and the guard's response time to them in the event log, allows you to remotely set and disarm various segments of the perimeter independently of each other, and give an alarm in the event of unauthorized crossing of the perimeter line or opening of devices.

For quick security response, you can connect loudspeakers to stop the intruder.

Get evidence to investigate

incidents

Use intelligent search and analysis of data in the archive for a detailed assessment of the situation and decision-making. Find the event you're looking for using the Analytics environment. Build reports on system events, work time tracking, intensity of movement of objects in the video surveillance area, find video data based on the values of various parameters, etc.



Modern search tools in VideoNet allow security specialists to process data from hundreds and even thousands of cameras in real time, or as close to it as possible, in a matter of minutes to search, for example, for an object or detect an alarming event. When investigating the circumstances of previously occurring incidents, archive search tools significantly reduce the time required to analyze the situation and

VideoNet algorithms for quickly searching information in the archive can be used in a variety of areas: city video surveillance, transport security, banking, logistics and manufacturing enterprises. Intelligent archive

search allows you to find the necessary information on events and data from various subsystems.

the number of personnel required to solve such a problem.

The Analytics environment is useful in a variety of situations

- Detection of objects exceeding the permitted speed or direction of movement
- Conducting an investigation into the circumstances of the object's movement (car theft, break-in, theft, etc.)
- Identifying objects by color
- Search for suspicious persons
- Analysis of suspicious situations recorded over a period of time
- Simultaneous collection of information about an event from all available sources (for example, the sound of breaking glass could precede the recorded movement, etc.)
- Drawing up various reports on surveillance, FIAS and ACS events
- Estimation of object movement activity
- · Identification of the main flows of transport or customers

Search options

The solution is completely independent of the functionality or type of cameras - all calculations are performed on the server. The search is carried out across any number of cameras in various combinations, using various scenarios: across the entire frame, across a selected area, using strictly defined parameters. The operator can set the dimensions, proportions of the desired objects, their color, speed, and direction of movement. He can select additional search criteria - various types of alarm events of the video subsystem, combine them with audio data filters, messages from other built-in subsystems and devices, for example, ACS or FIAS.

Generating reports of various types and forms for any of the subsystems

- Integral report it is now possible to find an event even faster
- **Heat map of objects** analyze the intensity of object movement
- **Events report** analyze text data based on selections from the event log
- Movement of employees on the site analysis of employee movement across the territory



Control cash register transactions

Use VideoNet functionality to prevent losses and violations at the cash register. VideoNet will provide maximum information on each suspicious case.

VideoNet will combine data from the trading system with data from the video surveillance system. It is simple now to get an answer to the question "Who is right and who is wrong?".

A video recording with captions and an extended receipt, which contains additional information about the event - for example, deleting a product or changing the price on a receipt, will help you understand the situation. You will receive clear and compelling data.

VideoNet has a complete set of tools that are suitable for investigating specific cases of violations at the point of sale, and for understanding the problems that require solutions.

Monitor the operation of cash registers in real time. Monitor the operation of a single cash register or all cash registers simultaneously.

Work with the archive and find any event over the past period, identify incidents, patterns of their occurrence and take action.

Make a sample using filters to find information. The sample results will be presented in a well-structured and easy-to-use format.

When filtering the data, set the time interval you are interested in, the cash register, select the operations that took place at the selected cash register, add a sample by goods and combinations of them, and, if necessary, specify the price of the goods. You will get a result that allows you to carry out operational control without complications. All you need to do is watch the video fragment selected by the system and compare it with the information from the receipt and make the right decision - was there a violation or not.



Distinctive features of the Total.POS platform

- Work without installing additional equipment or laying new cable lines
- Independence of the analytical module from the type of trading system
- Possibility of organizing a remote analyst workplace
- Ability to work with various types of trading systems within a single analytical space
- Long-term storage of analytical data array
- Ability to export to Excel format
- Highlighting lines in a receipt that match the filter conditions
- Possibility to increase the area of detailed information on a receipt

Using the universal Total.POS protocol will allow you to receive information about terminal operations from any external system



Supported trading systems and equipment

Implemented support for CSDD, Frontol, R-Keeper, MobileCard, Pilot, Supermag, BPS, Magner350 and Shtrih-M software, support for banknote counting machines from leading manufacturers: Newton, Laurel, Glory, Kisan. To work with banknote counting machines, the functionality of logging banknote numbers has been implemented. The numbers of counted banknotes are displayed in the captions on the video, and information about them is entered into the Trading journal. You can make filters and get a sample by banknote numbers for any period and view a video recording of the event. VideoNet also integrates with ATMs from the world's leading manufacturers: NCR, Diebold, Wincor/Nixdorf, BANQ IT

Expand the capabilities of the security system

VideoNet Integration Module VIM is a module for integrating your software with the VideoNet system.

Using VIM, implement integration with specialized hardware and software systems of the enterprise. For example, combine VideoNet with industrial automation systems (SCADA) and control technological processes and product quality. Combine VideoNet with CRM and warehouse software and conveniently control shipments.

Integration of the VideoNet video surveillance and security system with third-party software provides cost optimization, more complete management of enterprise business processes and increased situational awareness.

Advantages:

- Creating a unified information system and receiving common reports
- Managing resources of other information systems
- Organization of a single operator workstation for managing multiple systems
- Standardization and optimization of enterprise business and information processes

VNCOMMANDINTERFACE external interface

A simple and convenient means of integrating VideoNet with any external system capable of running an executable file.

This interface allows external applications to send text messages to VideoNet, which are recorded in the event log. Configure the VideoNet system schedule to react to the occurrence of a specific event from an external system. This can be an action or a sequence of actions that VideoNet will perform, for example, it will start recording from a certain camera, send an alarm message, etc. You have access to a wide variety of reactions to events.

The use of VNCommandInterface will significantly reduce time and costs when investigating various incidents. A simple search through the event log and quick

viewing of video clips will allow you to quickly understand the incident. Various notification tools in the VideoNet platform will notify you of the alarm and help prevent the incident.

OPC INTEGRATION



Combine security and technology systems into a single complex

Support for the OPC DA standard is an important step in the development of the VideoNet PSIM concept. You can combine the security system along with technological and engineering systems into a single enterprise management complex.

Data from all systems of the complex become available to the operator for automatic and centralized monitoring and prompt decision-making by the enterprise dispatch services.

The platform operates an OPC client, which allows you to obtain the values of equipment technological parameters from devices, controllers, technological and industrial equipment that support the OPC DA 2.0 specification and have an OPC server.

In VideoNet, you can create various reactions to the occurrence of events from the OPC server, for example, receiving an audio notification, saving a frame, recording video/audio, turning on the detector, informing via SMS.

Areas of application for OPC integration:

- Interaction of SCADA systems with a video surveillance system for visual monitoring and recording of the state of technological processes.
- Using OPC as a protocol for interaction between equipment of FIAS and ACS.
- To implement complex scenarios when security system equipment must be integrated with the engineering and technological systems of the facility.



To support OPC DataAccess 2.0, the VideoNet system has implemented the Total.SCADA platform for monitoring technological processes and interaction with external systems that support this protocol.

How does VideoNet PSIM implementation work for your goals?

You have a store or a supermarket

INDUSTRY SOLUTIONS



You have an office or a business center



Recommended technologies:

- Creation of audio and video evidence
- POS
- Integration with anti-theft systems
- Centralized management
- Quick information search
- Face recognition
- Licence plate recognition

Implementation result:

Quick resolution of disputes, reduction of losses at the cash register, improvement of service quality and control over staff discipline

Recommended technologies:

- Video surveillance
- ACS
- FIAS
- Graphic plans
- Face recognition
- race recognition
- Licence plate recognition

Implementation result:

An effective modern checkpoint system with multi-factor identification, full interaction of security systems in case of incidents, individual regulations for ensuring the safety of each of the tenants

You have an enterprise



Build a custom solution taking into account industry specifics

equipment and servers as a single system from anywhere on the

network, automate surveillance and security processes, respond

and specific use. Manage systems with a large number of

in a timely manner and prevent many predicted threats.

You have a bank or a financial institution



Recommended technologies:

- Video surveillance
- ACS, FIAS
- Perimeter security system
- Interaction with an automated process control system
- Monitoring center
- Graphic plans
- VIM, VN-Commandinterface
- Face recognition
- Licence plate recognition

Implementation result:

An effective modern checkpoint system with multi-factor identification, improving the quality of process control, full interaction of security systems in case of incidents, prompt detection and notification of an emergency situation, discipline control

Recommended technologies:

- · Creation of audio and video evidence
- POS
- Integration with banknote counting machines and ATMs
- Archive encryption
- Centralized management
- · Quick search and analysis of information
- Face recognition
- Licence plate recognition

Implementation result:

Quick resolution of disputes, prevention of fraudulent actions, reduction of risks of financial and reputational losses, improvement of service quality and control over staff discipline

Choose a solution for your tasks



COMPREHENSIVE SECURITY SOLUTIONS

For objects of any scale and complexity with the possibility of full control and monitoring from anywhere in the video network, taking into account industry characteristics and specific use.



INDIVIDUAL SOLUTIONS FOR YOUR FACILITY

Design solutions – individually selected video stations from the manufacturer to create security systems with high reliability requirements.



UNIVERSAL SOLUTIONS FOR TYPICAL TASKS

We have developed video stations taking into account the requirements for video surveillance systems and aimed at ensuring that the solution fulfills a wide range of tasks. The solution is simple to install on site, turn on and start working.



AN EFFECTIVE PRICING SOLUTION FOR BUSINESS TAKING GROWTH INTO ACCOUNT

VideoNet Guard NVR is a video recorder for building a video surveillance system based on IP cameras. VideoNet Guard NVR models are available with support for 24, 32, 48, 60 IP cameras. Simultaneous recording and playback.



SOFTWARE FOR SECURITY SYSTEMS

Detects and responds to dangerous situations in real time and instantly informs about the incident. Helps you make quick decisions, securely stores and quickly exports video data.



SAFE CITIES

RIGA (LATVIA)
ROSTOV-ON-DON (RUSSIA)
NOVOKUZNETSK (RUSSIA)
NABEREZHNYE CHELNY (RUSSIA)

ADMINISTRATIVE AND STATE INSTITUTIONS

OLYMPIC FACILITIES IN SOCHI
FEDERAL SECURITY SERVICE OF RF
MAIN DIRECTORATE FOR TRAFFIC SAFETY OF RF
MINISTRY OF JUSTICE OF RF
MINISTRY OF INTERNAL AFFAIRS
OF THE REPUBLIC OF UZBEKISTAN
BUNDESGRENZSCHUTZ POLIZEI (GERMANY)
POLIZEI SACHSEN (GERMANY)
CONSULATE GENERAL OF THE KINGDOM OF SWEDEI
CONSULATE GENERAL OF INDIA

THE MINISTRY OF INTERNAL AFFAIRS OF MOSCOW THE FEDERAL PENITENTIARY SERVICE OF RUSSIA FSBI "CLINICAL HOSPITAL NO. 1 OF THE OFFICE OF THE PRESIDENT OF THE RUSSIAN FEDERATION"



BANKS AND FINANCIAL INSTITUTIONS

THE CENTRAL BANK OF THE RUSSIAN FEDERATION
NATIONAL BANK OF THE REPUBLIC OF KAZAKHSTAN
SBERBANK BANKS
VTB BANK
«ROSSIYA» BANK
MTS BANK
GAZPROMBANK
ST. PETERSBURG CURRENCY MARKET
CREDIT BANK OF MOSCOW
BANK «SAINT PETERSBURG»

INDUSTRIAL FACILITIES

PJSC «GAZPROM»
PJSC «GAZPROM NEFT»
PJSC «ROSNEFT»
PJSC «LUKOIL»
PJSC «SEVERSTAL»
JSC «ALROSA»
PJSC «ALROSA»
PJSC «AVTOVAZ»
«KAMAZ» FACTORY
PJSC «HENKEL-ERA»
ISC «IATVIJAS GASF»

«TAIF» GROUP OF COMPANIES
PJSC «TVER CARRIAGE BUILDING PLANT»
URAL MINING AND METALLURGICAL COMPANY
ANTIPINSKY OIL REFINERY JSC
CHELYABINSK PIPE ROLLING PLANT
PJSC OMZ-SPECIALSTAL
NIZHNEKAMSKNEFTEKHIM JSC
JSC «SYZRAN OIL REFINERY»
PJSC «MOZYR OIL REFINERY»
I ISICHANSK OIL RFFINERY»





TRANSPORT FACILITIES

«VNUKOVO» AIRPORT (MOSCOW, RUSSIA)
HALLE /LEIPZIG AIRPORT (GERMANY)
BORYSPIL AIRPORT (KYIV, UKRAINE)
BEGISHEVO AIRPORT (REPUBLIC OF TATARSTAN)
SAMARKAND INTERNATIONAL AIRPORT
JSC "NORTH-WESTERN SHIPPING COMPANY"
JSC "RUSSIAN RAILWAYS"
ADMINISTRATION OF SEAPORTS OF LIKEPAINE

ST. PETERSBURG METRO (RUSSI KYIV METRO (UKRAINE) MINSK METRO (BELARUS) KHARKIV METRO (UKRAINE) TEHRAN METRO (IRAN) MASHHAD METRO (IRAN)

TRADE AND LOGISTICS ENTERPRISES

«MEGA» CHAIN OF STORES
«LENTA» CHAIN OF STORES

«BOSCO MANAGEMENT COMPANY» LL «EUROSIB» CJSC

