Smart retail video surveillance solutions 4.0

Business intelligence as a tool to improve performance management

TRASSIR today

Experience in CCTV surveillance
SINCE 2002

15 000 +
loyal customers worldwide

800+
qualified staff

USA
Mexico

Colombia
Ecuador
Brazil
Paraguay

United Kingdom
Germany
Spain
Morocco

Latvia
France
Romania
Turkey
Leban
Algeria
Egypt

Estonia
Belarus
Moldova
Georgia
Armenia
Azerbaijan
Israel
Kuwait
Qatar
Saudi Arabia
UAE
Oman

Kazakhstan
Kyrgyzstan
Tajikistan

China
Taiwan
India
Thailand
Vietnam

Nigeria

Mauritius

Republic of South Africa

50 countries with TRASSIR integrated solutions

Why TRASSIR?

Building a seamless security suite and controlling all systems
from a single interface is easy

A quick and easy way to design a security system

- Assistance in choosing the right equipment during the design phase

- TRASSIR-based integration with video surveillance systems, Security and fire alarm (SFL), access control system (ACS), intercom

Fine-tuning customizing

- Solution variation based on customer requirements: from the color of the cameras to the form factor

- Ability to extend the functionality of the system with customised scripts

Quick setup and easy operation

- Flexible algorithm setup for each type of event

- Intuitive interface and quick search for events in the archive

Full-cycle post-project support

- Prompt technical support, warranty service and after-warranty service

- Hot equipment swapping

TRASSIR Retail installations

TRASSIR®

2000+ stores

SPAR

BILLA

THE FRESH MARKET

PENNY MARKET

McDonald's

BURGER KING

KFC

FAVORIT market
keyfiyyətimizlə önünüzdəyik

M grillcafe

10K+
neuroanalytics modules installed in retail

99,9%
hardware compatible with the TRASSIR ecosystem

95%
customers implement video analytics after pilot project

TRASSIR Retail installations

Hypermarket

Store chains

Convenience stores

Specialty stores

Dark stores

Marketplaces,
Giveaway Outlet
Distribution centres

Stand-alone shops

Petrol stations

Objectives

Security challenges

- Decrease in thefts
- Securing property against tampering
- Ensuring the safety of visitors and staff
- Theft protection
- Preventing staff fraud

Business objectives

- Collecting customer data
- Data analysis
- Data visualisation
- Transaction report
- Customer traffic analysis

Objectives

Cash desk area

- Cashier fraud prevention
- Staff errores minimisation
- Cash discipline control
- Reputation losses reduction
- Queue management
- Cashier schedules optimisation
- Outlet capacity increase

Trading floor

- Display supervision
- Staff supervision
- Marketing analytics acquisition
- Theft prevention
- People flow behaviour analysis
- Data collection for merchandising planning
- Compliance monitoring in a pandemic management
- Ensuring safety

Office

- Reports collection
- Automated equipment performance diagnostics
- Single control centre

Entrance

- Conversion counting
- Unique and repeat people flow counting
- Target Audience defining
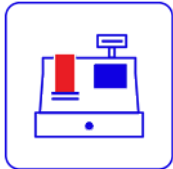- Store window marketing promotions evaluation

Parking and unloading area

- Car access control arrangements
- Parking space counting
- Special vehicle operating procedures control

Warehouse

- Theft and damage of goods prevention
- Warehouse supervision operations
- Staff supervision
- Working hours tracking

ActivePOS

TRASSIR®

Smart cash register control module

50%
reduced cash loss

100+
types of irregularities

Compatibility
with most cash registers

- Reduced losses due to cashier errors/ Misconduct

- Reduced time to investigate incidents

- Forecasting demand for goods

- Increased compliance with cash discipline and warning of potential fraudsters

- Conversion counting to purchase (in conjunction with the Neuro Detector module)

- Easy monitoring of several stores using statistical reporting

All store formats

Shelf Detector

TRASSIR®

Automated control of shelf space and merchandise display

+5% revenue per category of goods

- Control of merchandise display

- Notifications of empty shelves

- Forecasting demand for goods

- Generating reports

- Increasing product turnover

- Merchandise inventory planning

- Adjusting baking plans

All store formats

Heat Map on Map

TRASSIR®

Multicamera customer-flow 'heat map' for the retail space

Retail space management   **Checking stock conversions**

- Diagram traffic intencity and direction on a dashboard

- Collection of marketing and statistical data on customer behaviour

- Optimising and placement
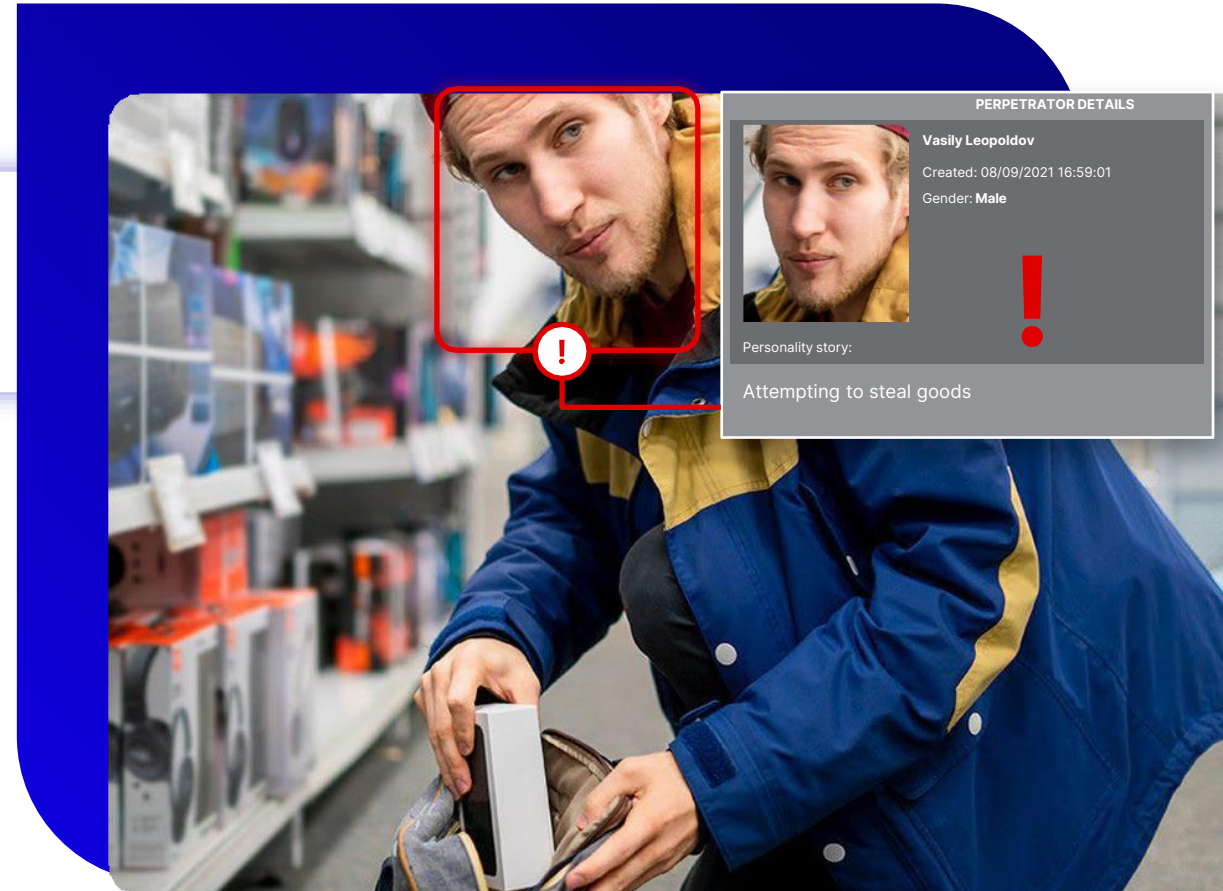
All store formats

Theft Prevention

TRASSIR®

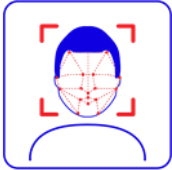## Theft Recurrence Prevention Module

Decrease in thefts by **75%**

- Recognition of faces and other facial attributes
- Easy search and uploading of evidence
- Quick notifications
- Thieves base availability at all retail outlets
- Using offload analytics

All store formats

PERPETRATOR DETAILS

Vasily Leopoldov
Created: 08/09/2021 16:59:01
Gender: **Male**

Personality story:

Attempting to steal goods

Face Recognition & Face Analytics
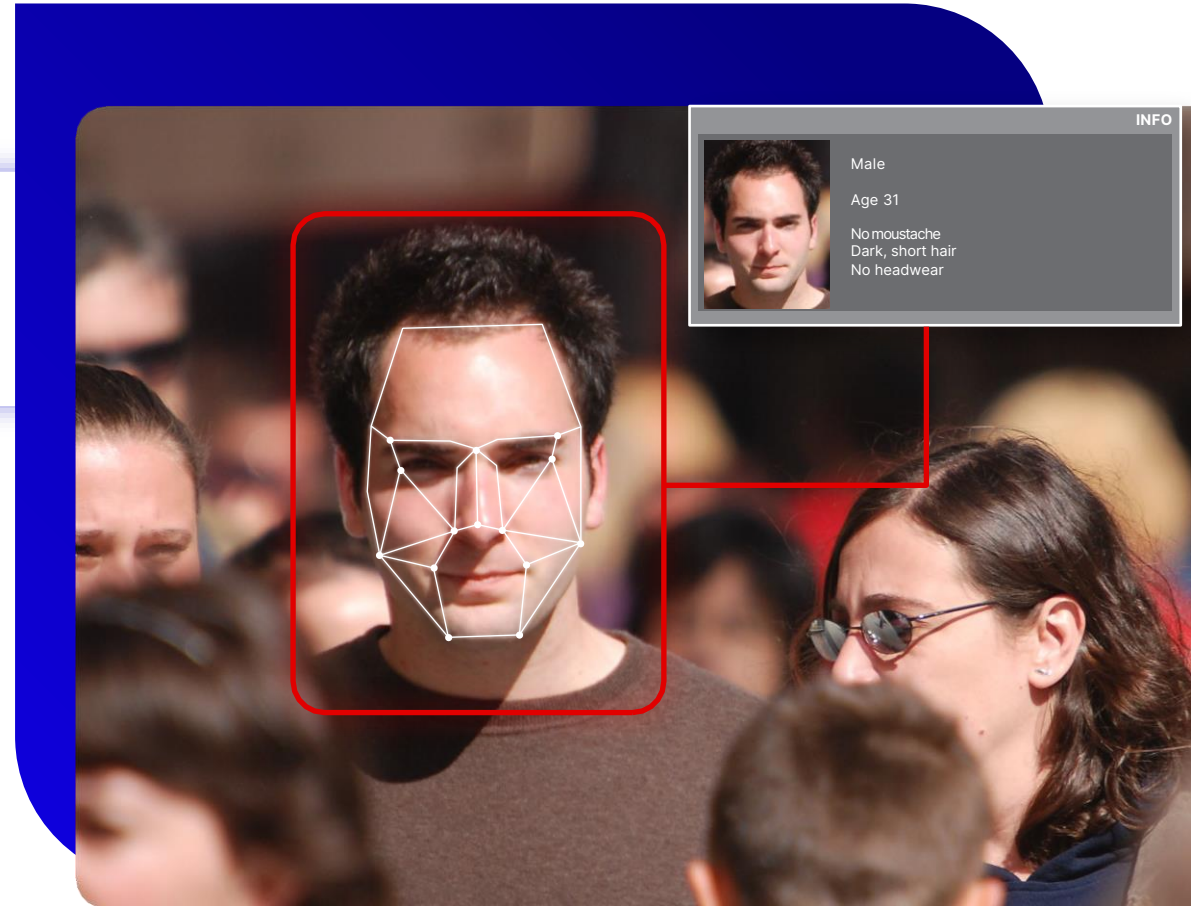
TRASSIR®

Biometric Recognition Module

VIP know your customer

8 key parameters to identify the TA

- Marketing analytics and data collection

- Counting % of repeat purchases and unique visitors to the outlet

- Creating a base with demographic segmentation

- Defining the Target Audience

- VIP customer identification

- Personalizing
- in-store offers

- Timekeeping accounting and attendance monitoring

- Integration with access control systems ACS

All store formats

INFO

Male

Age 31

No moustache
Dark, short hair
No headwear

Queue Detector and Neuro Counter

TRASSIR®

Smart Queue Control Module

9% increase in the number of receipts per cash register

2 reduction in the number of complaints and queues

by 10% reduction in refusal rates

- High accuracy > 99%
- Increase loyalty and repeat purchase %
- Optimise cashier schedules
- Increase outlet capacity
- Statistical records

Visitor Counting Module

+99.9% counting accuracy

16 zones crossings to count visitors in the frame

- Unique object counting based on neural network
- Excludes employee counting
- Estimating traffic flow
- Counting conversions to sales
- Evaluating the conversion rate of marketing promotions
- Displacement analysis

All formats

13

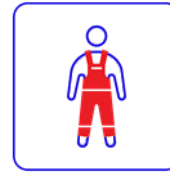# Staff Tracker, Wear Detector and Neuro Detector

TRASSIR®

Staff Control Module

Wear Detector and Neuro Detector

99%
Recognition accuracy

- Monitoring the availability of staff in the service areas
- Monitoring the implementation of work procedures
- Tracking KPIs
- Record of visitors served and neglected
- Report on the speed of service

- Identifies and classifies people wearing uniforms of a particular colour
- Generates reports
- Monitoring of safety and sanitary standards
- Control of staff visits to specific areas at specified intervals

Marketplaces, Giveaway outlet Distribution centres │ Dark stores │ Petrol stations │ Specialty stores │ Store chains│ Hypermarket │ Convenience store

Active Stock and AutoTRASSIR

TRASSIR®

Smart warehouse operation control module

Reduction of incident investigation time   **Reducing the number of unidentified losses**

- Tracking where and at what stage goods are lost or damaged
- Monitoring staff performance and safety procedures
- Monitoring the movement of goods and the picking process
- Detecting errors and fraud
- Adherence to schedules

Neural network-based recognition of vehicle license plates

28 number plate standards   **Organising access control**

- Organising access control to the parking space and unloading
- Automatic gate control
- Vehicle and parking space counting
- Prompt investigation of incidents
- Special vehicles monitoring
- Speed detection
- Database generation

Marketplaces, Giveaway outlet distribution centres│Dark stores│
Petrol stations│Store chains│Hypermarkets│Convenience stores

Neuro Left Object Detector and Pose Detector

Detecting forgotten and deliberately abandoned items
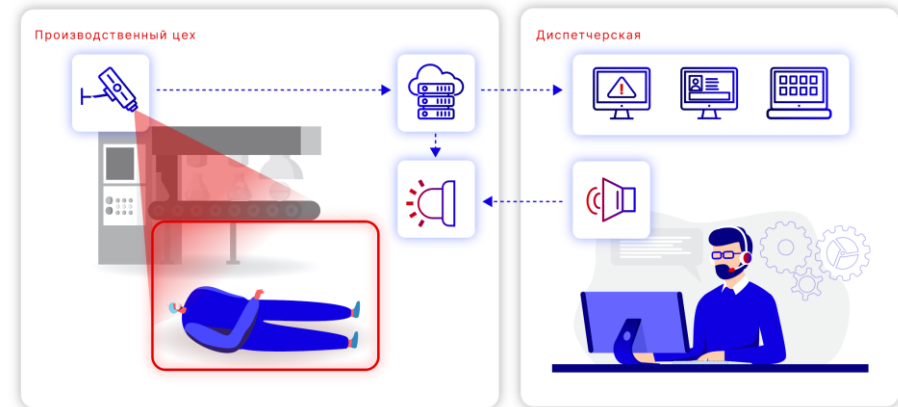

6 **Typical objects for recognition** | Suitcase | back pack | box | bag | duffle bag

- Defining the object type
- Notification after a set period of time
- Automatically links an object to a host

Identifying abnormalities in people's behavior

6 **Basic behavioural patterns** | Arms outstretched and firer's position | Arms raised above head | Squatting person | Falling person | Person holding handrail | Fighting positions

- Notification of homeless people, of a fallen person, of suspicious visitor behaviour characteristic for intruders
- Offload analytics are possible

Stand-alone stores | Specialty stores | Dark stores | Petrol stations | Store chains | Hypermarkets | Convenience stores

TRASSIR ACS

TRASSIR®

Access control and management system for rule-based security arrangements

Biometrics

Mobile access

1 server for ACS and video operation

- Personnel management

- Setting access levels

- Flexibility of work schedules

- Photo verification of passageways

- Object monitoring and manual control of devices

- Event log

- Working time record

- Mobile remote access

All formats

TRASSIR CMS

System for centralised management of a large-scale video surveillance system and the possibility of organising a situation room via a single interface

Auto-surveillance system performance monitoring

Saving on traffic

Backup of settings, centralised update

- Single entry point for all users
- Provides a convenient work with video on distributed objects when the system has a large number of video registrators
- Management accesses for users
- Centralised data collection of video analytics
- Automated distribution of updates with an option of individual servers selective update
- Saves traffic when simultaneous viewing live video from endpoints by multiple operators

To whom this solution suits:

→ Who has a large number of recorders. From 10 pieces.

→ Who needs a situation centre

→ Starting from 20 users

→ Who cares about the usability of a large, distributed system and needs a single entry point

→ Who has a large number of users and/or where users change frequently

→ Who maintains and runs the system

Petrol stations | Store chains| Hypermarkets

TRASSIR Cloud

TRASSIR®

Cloud video surveillance

6 years
Cloud infrastructure development examinations

200 000
Satisfied users worldwide

10+
Tier III security modern data centres

Low costs
Minimal maintenance costs and constant updating of the system without owner involvement

Customisable notifications
Receive notifications by email or phone, e.g. if the camera has detected movement or is switched off

Easy to operate
The single video surveillance control centre and fine access rights setting

Cell phone access
Mobile app for easy system management

Flexible payment option
Pay for the archive recording on a monthly basis or for a year at a time

Access from wherever you are worldwide
Remote and convenient video monitoring of your business from any device

Autocheck of all cameras
Automatic camera and recorder monitoring system

Video footage cloud storing
A failsafe solution and cutting-edge encryption ensures high security and safety

Video analytics available:

- Face recognition
- Object recognition

- License number recognition
- Neural network based counter

- Queue management
- Heat map of people's traffic

Petrol stations │ Store chains│ Hypermarkets │ Convenience stores

Cases | SPAR Supermarkets

TRASSIR®

A wide network of outlets that have service areas with their own kitchen. The network is actively expanding, opening new facilities in Moscow

Objectives:

- To reduce losses due to theft in stores
- To provide a solution to combat fraud at the cash registers
- To supervise the process of self-weighing of goods by customers in self-service areas

Solutions:

During the month, Face Recognition, Active POS, weight data control modules and special recorders for video analytics were installed. Thanks to these solutions, cash is now automatically counted together with the cashier when shifts are closed, cash shortage has been reduced by 30% and theft losses have fallen by 40%. Weight data control has also been developed to track the process of self-weighing of goods by customers. Thanks to the Face Recognition module, the customer estimates a 60% reduction in the theft risk.

TRASSIR ActivePos

2 NeuroStation servers

30% reduced inadequacies

40% reduced theft losses

60% reduced theft risk

Cases | Fresh Market "Yes!"

The Yes! brand is owned by Fresh Market LLC, part of the O'Key Group, one of Russia's largest and most successful retailers

Objectives:

- To create a system to control cash transactions
- To minimise cash shortage at cash registers due to staff errors and misconduct
- To implement the project in the shortest possible period

Solutions:

Trassir cameras were used for the project. The cash analytics module was implemented and took **2 months** to install. As a result of the work done, the customer's needs can be fully met. Following the phased implementation of the proposed solutions, cash losses were reduced by 30-50% and now account for only 5% of cash turnover. The customer continues to use video analytics at new outlets.

TRASSIR ActivePos

9 NeuroStation servers

1466 cameras

TRASSIR Cloud

30-50% reduced cash losses

100% chain stores are gradually introducing video analytics

Cases | Hypermarket chain

TRASSIR®

The Russian largest hypermarket chain. 16,960 stores, of which 12,503 convenience stores, 244 hypermarkets, 213 supermarkets and 4000 drogeries. Outlets are located in 2808 locations across the Russian Federation. Total number of employees of the company is more than 270,000

Objectives:

- national developer;
- scalability;
- hardware fault tolerance;

- a flexible, client-oriented system that allows customised developments to suit the customer's specific situation;
- warranty, service and technical support.

Solutions:

The TRASSIR Cloud network was implemented based on the scale of the customer's needs. Currently, 10,000 servers are running at the same time. This makes TRASSIR eligible for the nomination for Russia's largest cloud-basedvideo surveillance system with a record number of servers connected. And, most importantly, tested in the field.

The Active POS module is installed in the stores.

TRASSIR ActivePos

TRASSIR Cloud

Result | **Theft of cashiers by 400,000 roubles in one of the stores in a month was confirmed**, staff was replaced and business processes were created taking this module into account. The solution has been extended to store chain. Losses from checkout fraud have been minimised.