



# Cluster Power Cloud CCTV

A flexible solution to empower  
your business

April 2022



# About ClusterPower

*A technology company with a mission*

- Privately Owned Romanian company by group of **experienced entrepreneurs**
- Part of a group of companies with **expertise** and projects in industrial infrastructure, energy infrastructure and trading, Cloud and IT infrastructure projects.
- **A company with a mission:** Enable digital transformation through advanced infrastructure and innovative solutions.
- **Our vision** is to create enduring, maximized impact projects that place us in the front seat for reshaping how businesses impact our world in the future.
- **Our core values:** high-quality standards, trustworthiness and integrity.



# Video Surveillance Systems

The video surveillance systems provides you with equipment you need in order to focus on your business and **protect your assets**.

The CCTV technologies help you **fight fraud** and **theft**, providing you at the same time the **necessary information** and evidences for your decision-making process.



## Benefits of the video surveillance systems:

- ✓ Fight against theft and fraud
- ✓ Prevent work violence and false alarms
- ✓ Protect employees and customers
- ✓ Allow watching live or recorded events
- ✓ Save time and money



## Types of video surveillance systems:

- ✓ Fixed surveillance cameras
- ✓ Hidden surveillance cameras
- ✓ Programmable DOME 360 cameras
- ✓ Video LPR or thermal cameras
- ✓ Video controllers
- ✓ DVR - Digital Video Recorders

# Detection: Burglary Warning Systems

**Innovative systems** that protect you against theft or burglary. Moreover, our systems are designed to be **easily integrated in other security systems.**



## **Benefits** of the Detection-Burglary Warning Systems:

- ✓ Protect your business against theft and burglary
- ✓ Include options such as alarm buttons or movement sensors
- ✓ Help to identify critical situations such as high or low temperatures, floods, gas leakages, carbon monoxide or other dangerous situations
- ✓ Control other equipment connected to the alarm systems either automatically, locally or remote



## **Types** of detection and warning systems:

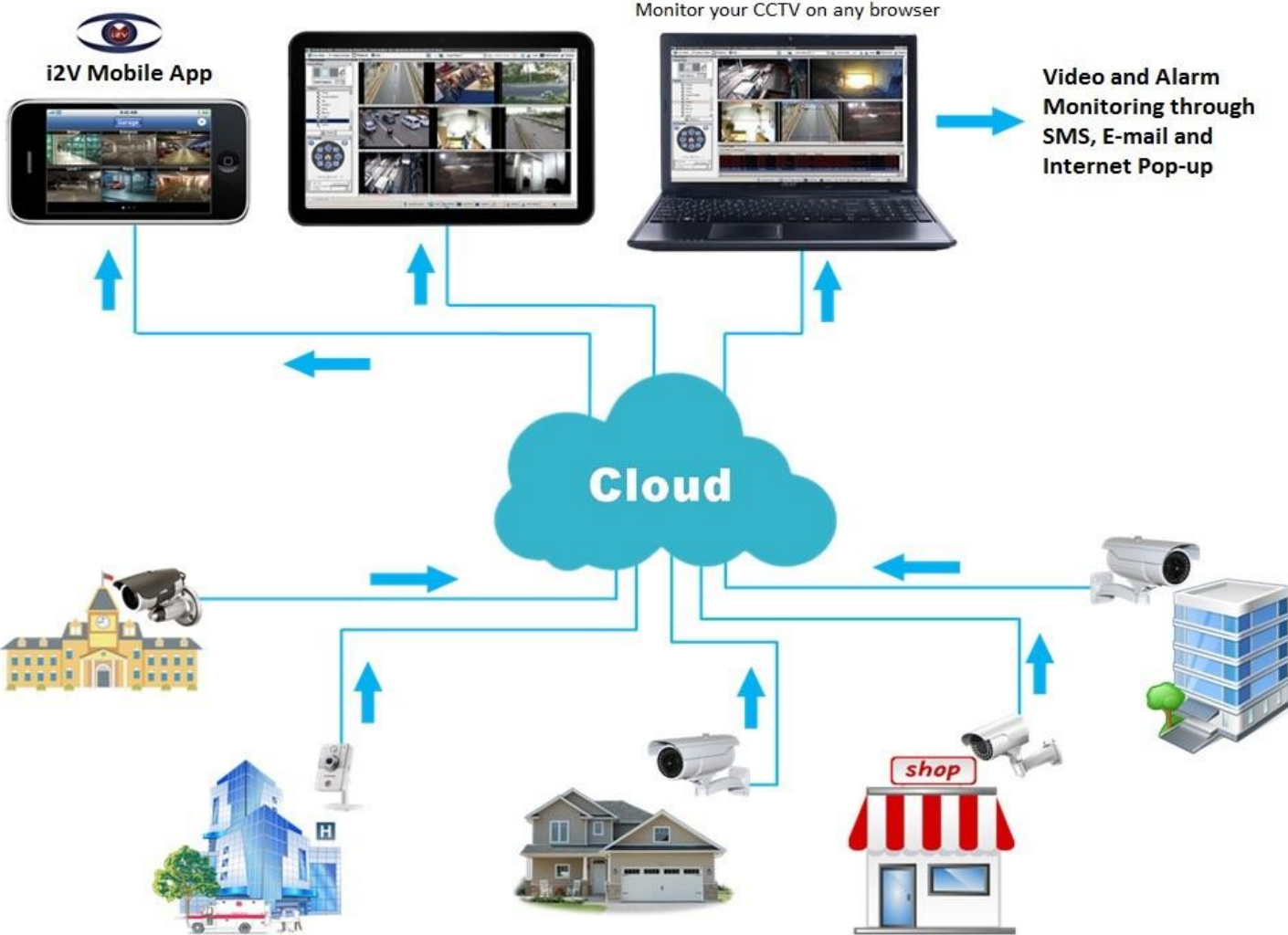
- ✓ Anti-theft monitoring systems
- ✓ Warning systems for signaling violence, constraint or deprivation of freedom
- ✓ Monitoring of critical conditions
- ✓ Commands for peripheral equipment

# Cloud Computing based solution

Users **can monitor footage locally on any device.** With our cloud solution, the IP DVR connects to the internet via a router/switch that through an API connects with the ClusterPower Cloud server. It will send the **live video data** to the Cloud to record, store and access remotely.

**ClusterPower Cloud CCTV** is a security-first solution, as we are proactively mitigating the cyber security threats as they emerge. Cameras and software in ClusterPower Cloud are constantly patched **to improve security** and **remove vulnerabilities.**

# Cloud Computing based solution



# Use Case 1:

## Smart city traffic

How to cope with constant congestion? How to prevent traffic jams, accidents - and **how to convert road traffic into a feasible system?**

- ✓ Less congestions
- ✓ Plannable traffic load
- ✓ Reducing accidents
- ✓ Optimized usage of existing road system
- ✓ Easy transfer to digital tolling
- ✓ Finding a way to manage big traffic data

# Use Case 2: 2-Intelligent Transportation Systems (1/2)



### Automatic violation detection

- ✓ Red light crossing
- ✓ Solid lane crossing
- ✓ Forbidden turn detection
- ✓ Exceeding speed limit
- ✓ Wrong way driving



### Speed control

Cameras with high precision laser units detect speeders even from 1 km distance and automatically identify vehicles by their license plate



### License plate recognition

Based on license plate data and optional brand, type and color recognition, wanted vehicles are easily identified on any types of roads



## Use Case 2: 2-Intelligent Transportation Systems (2/2)



### Mobile traffic surveillance

With portable and mobile traffic monitoring cameras, the listed functionality gets available independently of location, even at remote places



### Identifying license plate thefts

Though license plate swapping is a common crime, it can be busted with ease when adding make model and color recognition to the traffic system



### Multi scale traffic database

It's one thing to gather traffic information but another challenge is reliably storing and managing this data for live and future processing

# Use Case 3: **Smart Parking** (1/2)

## THE WORKFLOW OF AN ANPR-BASED ACCESS CONTROL SYSTEM

A vehicle access control system, when supported by license plate recognition, usually consists of the following parts:

### **Vehicle detection**

The approaching vehicle is detected by the camera, often with the help of a trigger, either a hardware-based solution (like an induction loop) or a software-assisted trigger (like ARH's proprietary Vehicle Detection technology). When the camera is triggered, it takes the images for further processing.

### **ANPR**

The captured images are processed by the Automatic Number Plate Recognition (shortly ANPR) software. This software checks if there is any license plate on the images, locate them and digitalizes the characters using a special Optical Character Recognition algorithm. The result is the digital license plate, that is transferred to the smart parking system.

### **Access control**

A smart parking system's key feature is definitely the automated way of access control. It compares the license plate data with the system database and decides if the vehicle is allowed to enter or not.

# Use Case 3: **Smart Parking** (2/2)

## THE WORKFLOW OF AN ANPR-BASED ACCESS CONTROL SYSTEM

A vehicle access control system, when supported by license plate recognition, usually consists of the following parts:

### **Vehicle entry**

If the vehicle is allowed to enter, the intelligent parking system can control the gate or barrier, or any physical access control that is installed at the entrance.

### **Vehicle tracking & exit**

After the vehicle was entered, its license plate data stays in the system and gets saved for further usage. It can be checked any time if a specific vehicle is inside the property or not, where it is exactly (various time zones can be defined with separate ANPR function) and statistics can be made as well.



Thank you for your attention!

Let's connect!

HQ: Cluster Power, 29-31 Telescopului Street, Bucharest  
Tech Campus: Cluster Power, 2 Viitorului Street, 207405 Mischii, Dolj

[www.clusterpower.ro](http://www.clusterpower.ro) | [office@clusterpower.ro](mailto:office@clusterpower.ro)