



# VAPELESS PRO

Advanced Vaping and Aggression Detection Solution



## ABOUT THE COMPANY:

Nanosensorics Company is based in Lithuania (European Union) and founded by the scientists of Lithuanian Kaunas University of Technology. Company specialize in production of innovative products based on "pattern recognition", IoT, gas analysis, and in the public, industrial, infrastructure, defense sectors.

# VAPELESS PRO: ADVANCED VAPING AND AGGRESSION DETECTION SOLUTION

**VAPELESS PRO** advanced AI-based pattern recognition solution to **detect vaping, smoking, using IQOS, THC, aggression, violence and indoor air quality**. Operating on a LoRaWAN® network it delivers fast detection, alerts, secure data and smart insights — making it ideal for sensitive indoor environments **where cameras can't be used to protect privacy**.



## KEY BUSINESS ADVANTAGES OF THE SOLUTION:

### Instantly Detect Vaping — Even with Narcotics

- Detection any type of vaping (even with illegal additives)
- Detection smoking classic cigarettes, THC and IQOS usage
- Precise and high accuracy detection of low level of vaping

### Identify Aggressive and Violent Behavior Automatically

- Advanced pattern recognition identifies shouting, fighting, banging or other aggression
- AI continuously compares environmental data against behavioral patterns to detect violations of health, safety and conduct policies
- Ensuring safety, compliance and behavioral policy enforcement

### Go Beyond Vaping — Total Indoor Intelligence

- Combines pattern-recognition for aggression, temperature, humidity, security and indoor air quality and even optional gunshot detection

### Reliable Installation with Long-Term Uptime

- Vapeless PRO has full **auto-calibration** and self-cleaning, so **no maintenance needed**
- Powered via power supply with battery-assisted LoRaWAN® communication — no battery swaps, no Wi-Fi needed.
- System using high end components and dedicated for 10+ years of service

### How VAPELESS PRO Enhances Your Environment

- Accurately detects vaping and smoking in areas where privacy is top priority
- Detect complex violent behaviors through AI-driven pattern recognition
- Prevent escalation before it affects people or property
- Achieve full visibility of what's really happening in sensitive spaces
- Provide irrefutable evidence for compliance, discipline, or security protocols
- **No sound recording** for full privacy protection

### Ideal For

- Schools, universities, hotels, rented apartments, hospitals, transport hubs, government buildings, correctional and detention facilities



Hotels



Hospitals



Schools



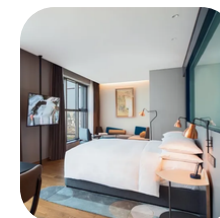
Restrooms



Office buildings



Commercial buildings



Rented Apartments



Passengers spaces

# SOLUTION STRUCTURE – VAPELESS PRO System

## Intelligent Monitoring with Pattern Recognition:



**VAPELESS PRO** isn't just a detector — it's a smart surveillance ecosystem that uses pattern-recognition AI to distinguish real threats and ensuring accurate detection of any type of vaping, aggression and other environmental conditions.

## CLOUD PLATFORM LAYER: REAL-TIME BEHAVIORAL INTELLIGENCE VISUALIZATION AND ALERTING

### What it provides:

- Web-based dashboard for visualized incident logs (vaping, aggression, environmental thresholds)
- Custom alert triggers based on AI classification confidence
- Reporting and export tools for behavior analysis, audits or compliance proofs
- Unlimited user accounts. Any number staff member can be informed about vaping events

### Pattern Recognition Advantage:

- Less false alerts = more trusted data = faster response
- Clear incident tagging: vaping vs. aggression
- Detects repeated behavioral patterns by time, location, or user group

## SENSOR LAYER: PATTERN-BASED DETECTION AT THE EDGE

### What it does:

- Uses a sophisticated AI pattern-recognition algorithm to detect e-vaping events
- Recognizes aggressive behavior by analyzing ambient patterns (shouting, banging, violent behavior cues)
- Detects IAQ, ambient temperature, humidity and optionally gunshots
- Performs self-calibration to adapt to acoustic and air quality baselines in each room

### Pattern Recognition Advantage:

- Detect any type of vaping, using classic cigarettes and IQOS
- Distinguishes aggression from loud background noise
- Detects unconventional or drug-laced vape events that basic sensors miss

## GATEWAY LAYER: SMART, SECURE COMMUNICATION VIA LORAWAN®

### What it does:

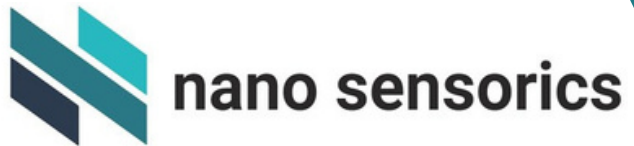
- Securely transmits event data to the cloud using LoRaWAN®
- Ensures low-latency, long-range transmission with AES encryption
- Enables building-wide coverage with minimal gateways

### Pattern Recognition Advantage:

- Efficient use of bandwidth for smarter multi-sensor deployments
- Ensures fast alert delivery even in dense or interference-heavy environments

## VAPELESS PRO ENABLES REAL ADVANCED VAPING AND AGGRESSION DETECTION IN YOUR FACILITIES

Whether you're operating a public facility such as school or hotel, shopping mall, managing vaping and aggression prevention is a must. VAPELESS PRO gives you the tool to understand, monitor, act and prevent — fast.



**TURN EVERY SENSITIVE SPACE INTO A SMART,  
PROACTIVE PROTECTED ENVIRONMENT**

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