

CCTV Automated Lens Cleaning Technology

The CCTV Automated Lens Cleaning Technology detects and removes various contaminants on the lens surface using electrical vibrations.

By sending electrical signals to the lens, it effectively eliminates dust and debris.

Unlike mechanical systems such as wipers, this method requires no additional components, reduces wear, and offers faster, streak-free cleaning compared to conventional thermal cleaning methods.



▲ The CCTV system with electronic self-cleaning glass(Drop Free Glass) automatically detects and cleans contaminants from the lens surface.

Issues to Tackle

- ❑ Video surveillance is compromised when lens contamination, such as dust or water droplets, occurs on CCTV cameras.
- ❑ Traditional cleaning methods, like wipers and thermal solutions, are inefficient, requiring regular maintenance and incurring high operational costs.

Expected Benefits ✓

- ❑ Enables cleaning in less than 1 second, making it ideal for areas prone to saltwater exposure, heavy rainfall, and storms, without disrupting video surveillance.
- ❑ Eliminates the need for mechanical parts like wipers or thermal components, ensuring high durability and lower maintenance costs.
- ❑ Maintains uninterrupted video monitoring even in harsh environments, improving overall operational reliability.

💡 Key Services

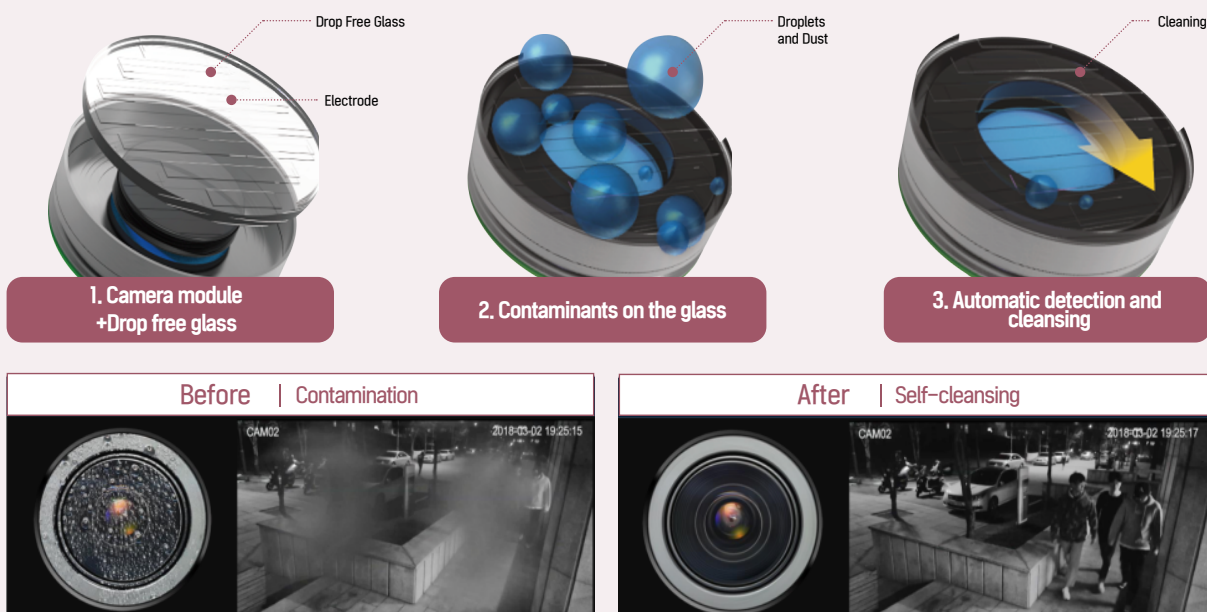
- Automatically detects and removes lens contamination using electrical vibration, ensuring clear and consistent image quality.
- Adaptable to various industries, including autonomous vehicles, marine surveillance, and high-precision architecture applications.
- Supports integration with lightweight, energy-efficient designs, broadening its use across diverse industrial fields.

⚙️ Use Cases

- Applied in disaster-prone areas such as breakwaters and urban zones in Busan, ensuring operational stability and disaster monitoring.
- Incheon City 'Songdo Central Park' and Seoul City 'COEX': Installed to strengthen urban security and disaster preparedness in major metropolitan locations.

Key Components

Configuration



Key Technologies

1. Electronic Self-Cleaning Glass (Drop Free Glass)

- This technology applies multiple electric signals to remove contaminants such as dust and oil droplets from the glass surface through vibration.

POINT High cleaning efficiency and fast speed enable the removal of both solid and liquid contaminants like dust, grease, and water droplets without the need for additional sensors, ensuring exceptional effectiveness.

2. AI-Powered CCTV with Electronic Self-Cleaning Glass

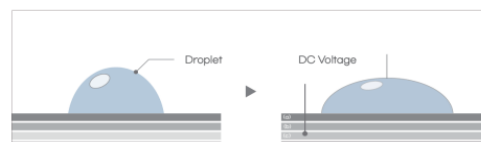
- A CCTV system integrated with self-cleaning glass technology automatically detects and removes contaminants on the camera lens surface.

POINT Equipped with electronic self-cleaning glass to ensure clear and contaminant-free images.

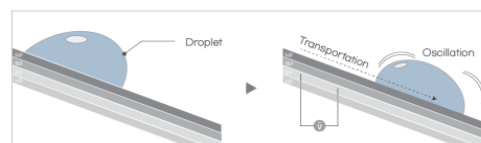


Working Principle

- Based on Drop Free Glass technology, an electric signal is applied to the surface coated with an insulator, altering the shape of contaminants stuck to the surface.



- By using this principle, contaminants such as water droplets and dust are vibrated and removed from the surface through oscillation and movement.



Technology Companies

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