1. Improve visibility performance by cleaning sensor/camera surface using water and air.

2. Propose variety of nozzle lineup for every type of application.

3. System package proposal adapted to big environment constraints.
**Benefit**

- Sensor Cleaning System is a new requirement
- Sensor functionality can be deteriorated or lost due to dirty. Cleaning system will assure sensor performance in all type of conditions.

![Diagram showing cleaning process]

- **Additional functions:**
  - Ice removing using washer fluid pressure
  - Rain drops can be removed with only air function
  - Thin film of dust can be removed without fluid consumption
Technical Advantage

- Non-return valve integrated
- Nozzle outlet adapted to lens/sensor size

Mini-Telescopic Nozzle advantages
- Low packaging conditions
- No visual interference in camera FoV

- High cleaning performance
- Low fluid consumption
- Directly assembled in Camera
- Smart Integration

One box

Air & water cleaning system:
- Blowing compressed air is pressurized by washer system pump
Technical Advantage

Washer Fluid + Air Cleaning System

Air & water cleaning system:
• Air is pressurized by washer system pump