

ITOPS AUTOMOTIVE

Innovation for Smart vehicles



**Company
Overview**

**Product &
Technology**

Customers



Established | 2011

Location | 88-14, Saneop-ro 156beon-gil,
Gwonseon-gu, Suwon-si,
Gyeonggi-do, Korea

Business Area | Automotive Parts

- // LiDAR
- // Sensor
- // Actuator
- // Electronic part

Certification | // IATF 16949
// CMMI ML3
// ASPICE CL2

※ **CMMI** Capability Maturity Model Integration

※ **A-SPICE** Automotive Software Process Improvement and
Capability dTermination



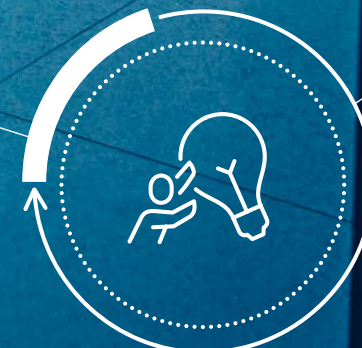
Best Quality, Beyond Customer Satisfaction



| Young company |



| Future hidden champion |



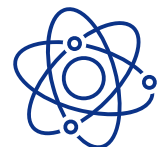
| Creative company |

Development of core technologies for future smart cars

02 CORE VALUE



01 MISSION



We contribute to a safe and convenient automotive technology for **smart vehicle parts** with **excellent technology and quality**.

03 VISION



Dynamic ITOPS 100
100million USD sales company with a dynamic growth.



04 HISTORY

ITOPS leaps toward the hidden champion of the auto parts industry.



Innovation for Smart Vehicles

Establishment/ Fast growth '11 ~ '15

- ✓ Active Hood Lift System Mass production and business expansion
- '12 First mass production of AHLS in Korea. AHLS is adopted 8 cars
- '14 First mass production of the pyrotechnic actuator in Korea
- '14 Certification of Supplier Quality for Hyundai Motor (Electrical Assembly)
- '15 Quality Management System Certification - ISO/TS16949

✓ Mass production of Active Hood Lift System and adopted various vehicles

Product/Customer diversification '16 ~'18

- ✓ Product and customer diversification
- ✓ Increase in new orders
- '17 Moved to the new Factory(Suwon)
- '18 Built SMT mass production lines
- '18 Certification of Supplier Quality for Hyundai Motor(Soldering)
- '18 Software Development Process Certification - CMMI ML3 / ASPICE CL2
- '18 First mass production of Anti-Pinch Sensor in Korea

✓ Moved to the new Factory
 ✓ Establishing a process for designing and manufacturing automotive electronic parts

Second takeoff '19 ~

- ✓ Core Technology Extension
- ✓ Entering the global market
- '20 Expanded mass production of Fuel Door Actuator and 2nd generation active hood
- '21 Developed Flash Lidar
 - Promotion of the Commercialization of Advanced automotive technology - LiDAR / Sensor / ECU / Actuator for Electric Vehicles
 - Reinforce R&D capabilities and increase investment in technology development Entering the global market - Japan/China/India/North America

✓ Advanced technologies are under developing
 ✓ Promoting global customer

05 CERTIFICATION

Registered patents & Quality certification from both public authorities for excellent technology and the best quality assurance

Patent certificate



certificate



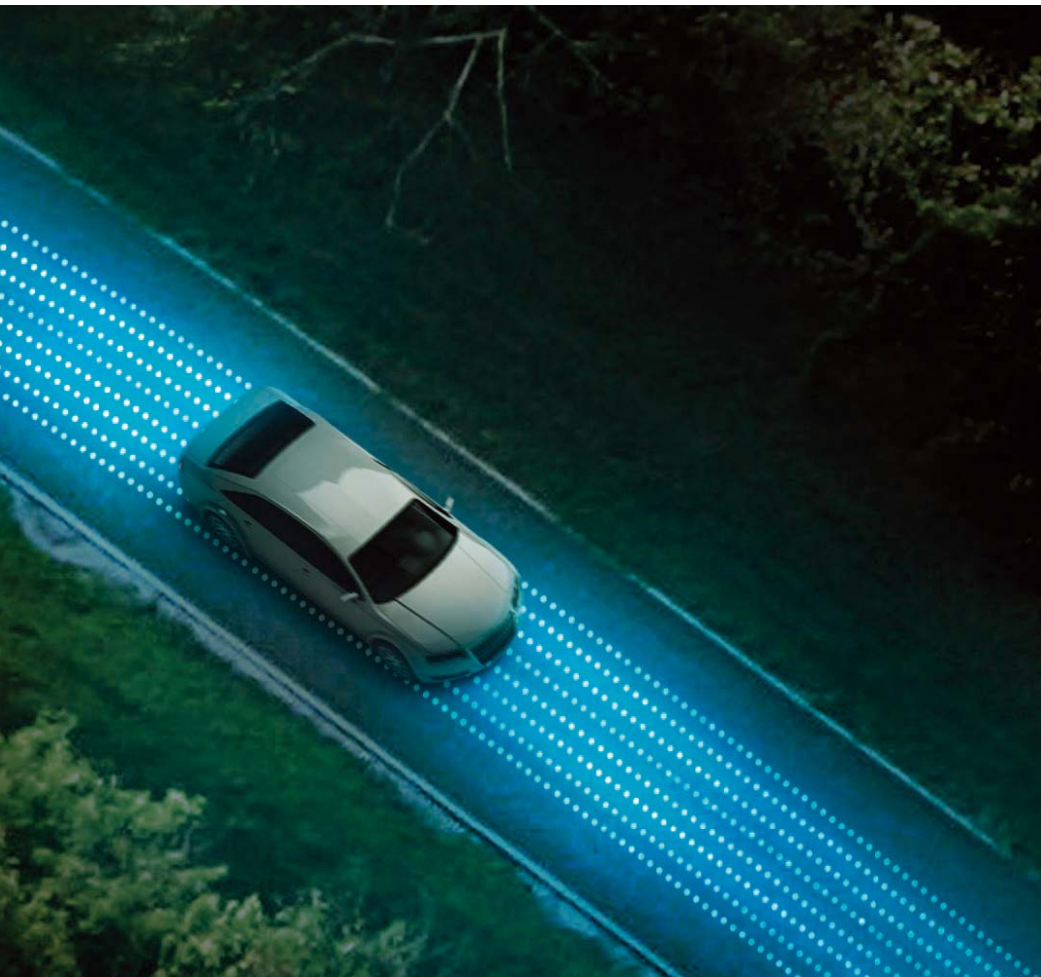
Award-winning performance



01 Autonomous Mobility

02 Safety

03 Electrification



Autonomous Mobility

- Flash LiDAR



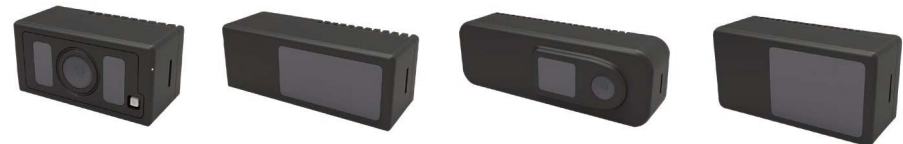
Safety

- Active Hood Lift System
- Anti-Pinch Sensor



Electrification

- Fuel Door Actuator / EV Charging Actuator
- Charging Door Module



AHLS



Active hood system
Sensor & ECU

APS



Anti-Pinch
Sensor



Fuel Door
Actuator



EV Charging
Actuator



Charging Door
Module

01 Autonomous Mobility

Flash LiDAR

01 Flash LiDAR

ITOPS LiDAR is a product that provides the best solution for autonomous vehicle, autonomous mobile robot.

We are the world's leading LiDAR developer that provides 3D information in QVGA-level 3D Image and have achieved a innovative differentiation from existing products through the fully solid state method that has improved the stability.

PRODUCT VIEW



KEY FEATURE



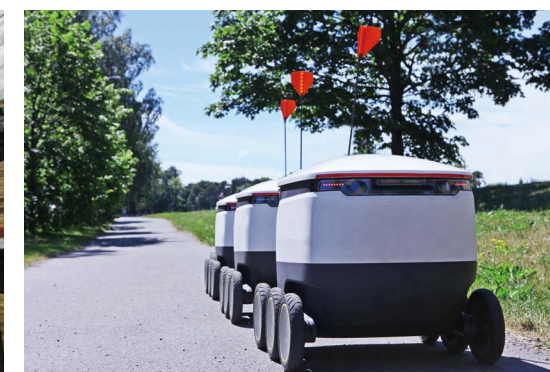
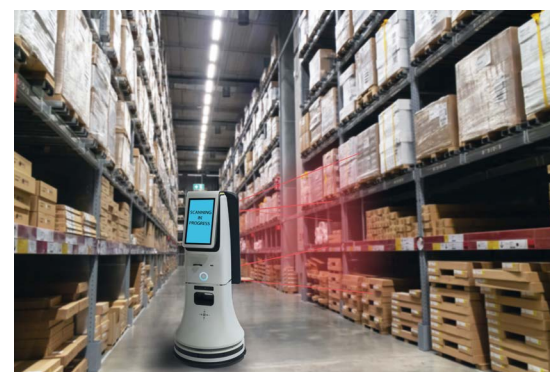
- 01 Pure Solid-State
- 02 Committed to the Highest Automotive Standard
- 03 QVGA grade Imager
- 04 High SNR for Solar Noise
- 05 Shock & Vibration Absorbent/Resistant
- 06 Compact Size

APPLICATION

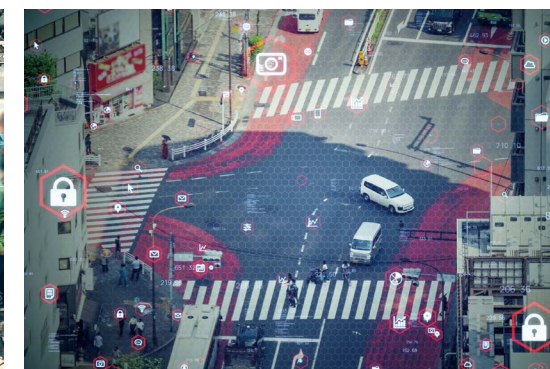
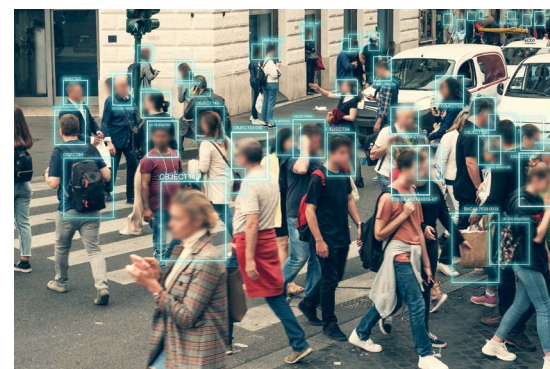
Automotive



Robotics



Smart City



02 Safety

Active Hood Lift System
ANTI-Pinch Sensor

■ Active Hood Lift System

I SENSOR & ECU

- High-speed data acquisition (10kHz)
- Accurate collision positioning detection
 - Impulse correction in accordance with the impact location
- Robust pedestrian detection & classification algorithm
 - Consider various factors such as impulse, location, and temperature
 - Excellent Pedestrian recognition algorithm

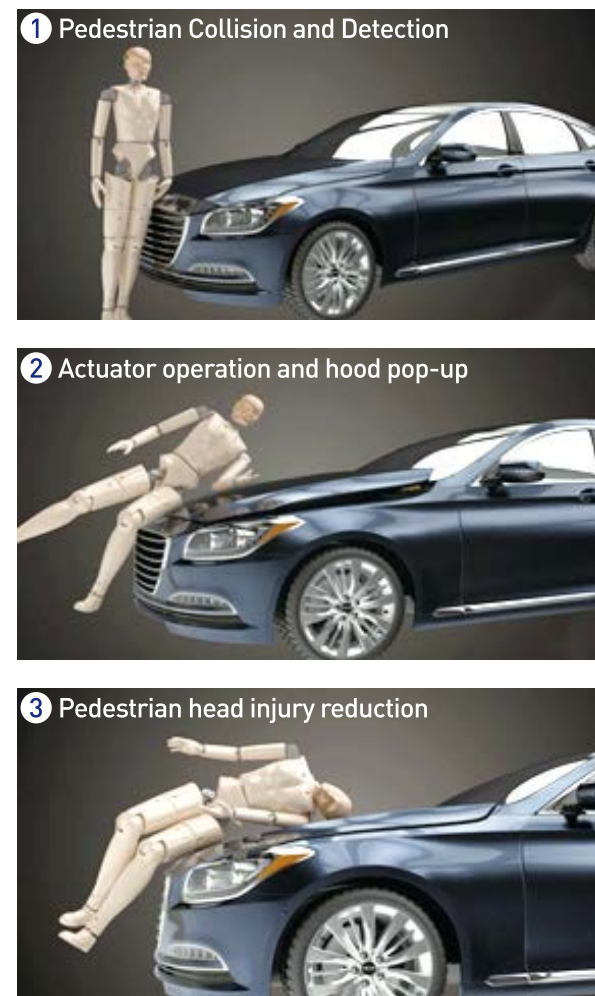
I ACTUATOR

- Pyrotechnic actuator
 - Fast deployment performance : 16ms
 - Operated with enhanced hinge structure

PRODUCT VIEW



Process



■ Anti-Pinch Sensor

- Sensor for user safety in power door system
 - Power Tail Gate / Power Sliding Door

PRODUCT VIEW



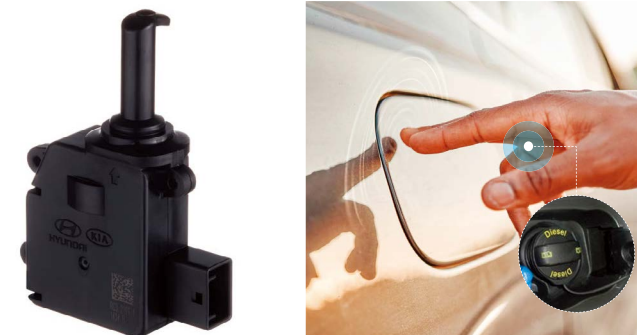
03 Electrification

Fuel Door Actuator
EV Charging Actuator
Charging Door Module

■ Fuel Door Actuator

- Fuel Door Opening and Locking Actuator
 - Push type structure(IP-67)
 - Low price / Light weight

PRODUCT VIEW



■ EV Charging Actuator

- Prevents the charger (Inlet) from unplugging when charging an electric vehicle
 - Waterproof structure(IP-67)
 - Emergency release function

PRODUCT VIEW



■ Charging Door Module

- Senses the position of the door (Open/Close)
 - Waterproof structure
 - Light weight
 - Sensing the position of the door
 - Manual Close Function (Clutch Function)



CUSTOMERS

Global companies that are with us.

OEM

 www.hyundai.com	 www.kia.com	 www.gm.com
 www.smotor.com	 www.byd.com	 www.zoox.com

TIER-1

 www.phauto.co.kr	 www.slworld.com	 www.ket.com
 www.yuracorp.co.kr	 www.kyungshin.co.kr	 www.seoyonelec.com
 www.kc.co.kr	 www.aia21.co.kr	
 edscha.com	 www.hi-lex.co.kr	

STRENGTH



ITOPS has **growing for 10 years continuously** and marked a milestone in the history of autonomous driving.



ITOPS is **fully prepared for future markets** such as autonomous driving, safety, and eco-friendly.



ITOPS has a **wide range of production lines**, from SMT manufacturing to product assembly.



ITOPS has the ability to **develop not only hardware and software** but also various fields.



ITOPS is a **young and creative company**. We want to grow into a company that can compete and stand shoulder to shoulder in the global market.

COMPANY VIEW



1 Company front view / 2 SMT VIEW / 3 Automation highlight / 4 Quality Highlight

ITOPS AUTOMOTIVE

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