About Kingwaytek Technology

1.1 Milestones of Kingwaytek Technology
1.2 Historical self-driving showcases in Taiwan

勤崴國際 KINGWAYTEK TECHNOLOGY

IPO NO: 6516

1998

Founded

Kingway focuses on Digital Map and GIS projects as a System Integration role.

2007

Chunghwa Telecom become our corporate shareholder

Change company name to Kingwaytek.

2010

Launched Navigation APP

Release own-brand mobile navigation software to market (over 6.5M downloads)

2016

Developed telematics system and traffic data

The first 4G connected in-dash navigation System in the Taiwan market, cooperating with BMW, Audi, and Hotai Connected

2018

Developed HD map

Collaborate with NVIDIA for AI HD map collection and Autonomous driving.

2019

Established AV developing center

Hutoushan Innovation Hub for AV, telematics, and IOT research and consulting services, more than 13,000 Foreign visitors.

2020

Got the first AV operating license

Started to operate in ChangbinStarted to operate in Changbin, Danhai, and Taoyuan airport., Danhai and Taoyuan airport

2021

Self-Driving Street Sweeper

Apple Map

Make HD map for Apple

2022

Commercial Operation TSMC - Shuttle Bus

Historical self-driving showcases in Taiwan

15 self-driving vehicles
1 self-driving street sweeper
11 sites
1 innovative team

9 2023/8
Taoyuan : World Hakka Expo
✔ First World Expo Venue
✔ Mixed Traffic Flow

10 2023/10
New Taipei : Tamsui Phase 2 Self-Driving Shuttle Service
✔ V2V, Integration with C-V2X
✔ Dual Vehicle Coordination

4 2020/8
New Taipei : Tamsui Phase 1 Self-Driving Shuttle Service
✔ Endurance Testing ✔ 5G C-V2X
✔ Co-operation with Bus Operators

8 2023/2
Taichung : Smart Highway Taiwan 61
✔ Taichung Taiwan Boulevard

3 2020/9
Taoyuan: Taoyuan Airport
✔ Navigation with Lane Path Planning
✔ On-Demand Service

5 2021/8
Tainan : TSMC
✔ Factory Shuttle Service

1 2019
Taoyuan : Tiger Head Mountain Innovation Park
✔ Self-Driving Car System Development and Training
✔ 5G Vehicle-to-Vehicle Networking Test Site

11 2024/02
Tainan Lantern Festival: Incorporating the Year of the Dragon Theme
✔ Miniature Self-Driving Cars

2 2020/1
Changhua Self-Driving Tourist Shuttle Service
✔ Mixed Traffic Flow ✔ Challenging the Longest Operating Route

7 2022/10
Kaohsiung : Taiwan Design Exhibition
✔ Miniature Self-Driving Cars

6 2022/9
Tainan : Sha Lun
✔ Self-Driving Street Sweeper Test

120,000KM↑↑
Cumulative Mileage

100,000↑↑
Cumulative Passenger Count

92%↑↑↑
Cumulative Satisfaction

KingWAY

勤崴國際
KINGWAYTEK TECHNOLOGY

Complete self-driving application case in Taiwan

Customized design to specific venues

INDUSTRIAL PARK

TOURIST ATTRACTION

SUBURBAN AREA

RESIDENTIAL AREA

遊園車接駁

2019-2020
(Research and Providing Self-Driving Shuttle Services)

SELF-DRIVING TRAINING AND DEVELOPING CENTER

TAOYUAN HUTOUSHAN INNOVATION HUB, TAOYUAN

Provide a complete self-driving developing environment and equipment.

Video

SELF-DRIVING BUS TRANSFER SERVICE AT PARKING LOT

TAOYUAN INTERNATIONAL AIRPORT, TAOYUAN

Self-driving transit service for passengers to pick up their cars at the airport parking lot.

LAST MILE TRANSIT SERVICE

DANHAI NEW TOWN, NEW TAIPEI CITY

Partnership with Chunghwa Telecom and the Tamsui Bus Company, this is the first self-driving public transportation service with C-V2X technology in Taiwan.

Video

2020-2022

Collaborated with the Environmental Protection Administration to launch Taiwan's first self-driving street sweeping and park shuttle vehicle.

SELF-DRIVING TOURIST TRANSIT SERVICE

CHANGHUA BINHAI INDUSTRIAL ZONE, CHANGHUA

Connecting four tourism factories, and combining travel and tourism industry.

Video

SELF-DRIVING STREET SWEEPER

TAOYUAN HUTOUSHAN INNOVATION HUB, TAOYUAN

Apply self-driving street sweeper service to improve cleaning efficiency and reduce the occupational hazard of frontline personnel.

SELF-DRIVING SOLUTIONS OF SHUTTLE TRASPORTATION IN AMUSMENT PARK/TOURIST SPOT

TAIWAN DESIGN EXPO IN KAOHSIUNG

To provide the self Driving solutions of shuttle transportation for tourists.

Video

2022-2024

(First in Taiwan - Commercial deployment, world expos, V2V self-driving shuttle service)

SELF-DRIVING SOLUTIONS OF SHUTTLE TRASPORTATION /LOGISTICS IN SCIENCE PARK

TSMC IN TAINAN SCIENCE PARK

To provide the self Driving solutions of shuttle transportation and cargo delivery in TSMC smart factory in Tainan Science Park.

- Video about shuttle transportation
- Video about cargo delivery

EXHIBITION SHUTTLE SERVICE

TAOYUAN - QINGPU: 2023 HAKKA EXPO

Taiwan's debut self-driving shuttle service integrated with a world-class exhibition, and successfully navigated mixed traffic near the high-speed rail station, setting a record with 8,500 passenger rides.

- Related videos

V2V PRE-ART SHUTTLE SERVICE

NEW TAIPEI, DANHAI KANDING STATION

Kingwaytek utilizes V2V technology to create a Pre-ART autonomous shuttle service. This service combines self-driving technology with the advantages of light rail and metro systems. It allows for flexible vehicle organization based on demand, extending the use of rail transit.

- Related videos

LANTERN FESTIVAL SHUTTLE SERVICE

TAINAN SHA LUN, 2024 TAIWAN LANTERN FESTIVAL IN TAINAN

Kingwaytek introduced the frst self-driving car for Taiwan Lantern Festival, offering test rides at Guiren 18th Road in Sha Lun Science City. During the 16 days of Lantern Festival period, it operated 400 trips, with over 1,000 passengers aboard.

- Related videos

Micro Self-Driving Vehicles

2.1 Introduction to Micro Self-Driving Vehicles
2.2 Application of Micro Self-Driving Vehicles

Diverse Micro Self-Driving Vehicles

Autonomous Cargo Delivery Vehicle

Autonomous Passenger Vehicle

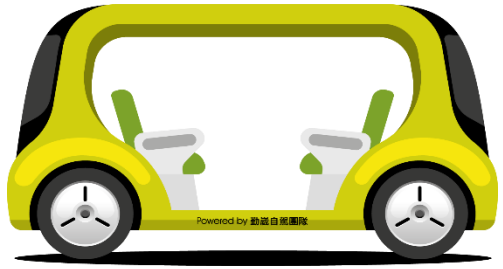
Parameter Indicators

Vehicle Dimensions 3380 × 1350 × 1850mm	Maximum Payload 350kg	Wheelbase 2500mm	Hill Climbing Ability 20°	Turning Radius ≤ 4m
Charging Time 3.5 hr	Maximum Speed Forward≤ 15km/h	Autonomous Driving Levels L4	Continued Mileage 50km	Power Requirements 110V

Micro Self-Driving Vehicle Service Process

1

Passengers board the micro self-driving vehicle at designated points.

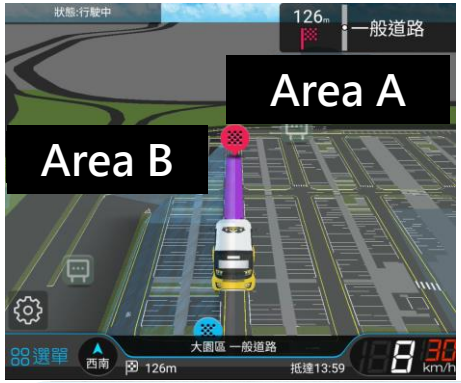


2

Select the desired destination on the in-car screen.

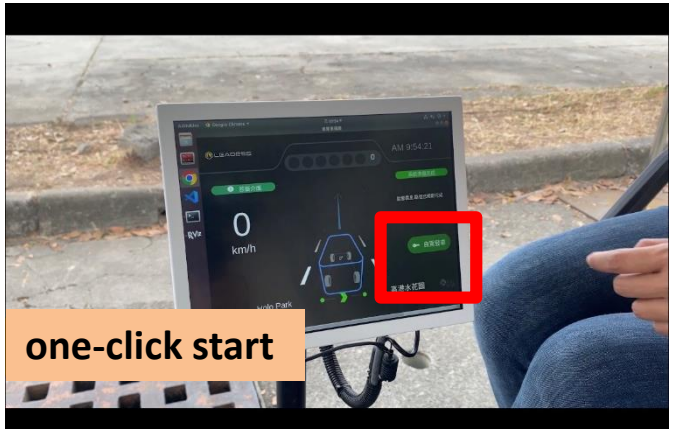
3

The system plans paths in real time by self-driving mode.



4

Redirect automatically when arriving at designated site Next boarding point.



Hop on and off (accommodate 4-5 people)
Fixed-point round trip or design multiple stops.

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2024 Self-Driving Innovation

Taiwan Lantern Festival in Tainan_ Pioneering Lantern Festival Self-Driving Vehicle Experience

- Kingwaytek launches the first Taiwan Lantern Festival self-driving vehicle!
- Offering test rides at Guiren 18th Road in Sha Lun Science City.
- In just 16 days during the Lantern Festival, it operated 400 trips, with over 1,000 passengers aboard.

2024 Taiwan Lantern Festival in Tainan Video

| **First Taiwan Lantern Festival Self-Driving Vehicle in the Taiwan**

Challenge of Micro Self-Driving Vehicles in Taiwan

Difficulties of On-Road Deployment

Illegal Parking on Red Lines

Occupying Bus Stop Zones

Large Vehicles Occupying Parking Spaces

Construction Machinery Occupying Parking Spaces

Loading/Unloading in Red and Yellow Lines

Set Up Stalls in Yellow Zones

Illegal Parking on Red Lines

Large Motorcycles Occupying Motorcycle Parking Spaces

Video _ Overcome Complex Road Scenarios

When motorcycles pass, self-driving vehicles stop.

Two Vehicles Passing

Obstacle Avoidance

[redacted]

Multi-Vehicle U-turn

[redacted]

Station Setup

[redacted]

Micro Self-Driving Vehicle ODD Inventory

ODD Item	Scenario Description
Speed Limit	Operate at a maximum speed of 20 kph
Pedestrian Protection	Provides collision protection for pedestrians in front of the vehicle and adjusts the protection distance based on vehicle speed.
Automatic Following of Moving Obstacles	When the vehicle encounters a moving obstacle ahead, it can follow behind at the obstacle's speed.
Static Obstacle Protection	If the vehicle encounters a stationary obstacle on its route, it can stop at a safe distance to avoid collision.
High-Speed Dynamic Obstacle Protection (Cars/Motorcycles/Bicycles Entering Path)	The vehicle can predict the movement of incoming vehicles and make corresponding protection decisions.
Random Obstacle Protection (e.g., Construction Zones)	Customized recognition of special obstacles.
Small Obstacle Avoidance (Slight Deviation from Original Path)	When a small stationary obstacle, such as a traffic cone, is detected on the path ahead, the vehicle can slightly deviate from its original path to avoid it.
Large Obstacle Avoidance (Lane Change to Bypass)	When encountering a stationary obstacle in its path, the vehicle can change lanes to bypass it, provided the surrounding environment allows for it.
Turning Traffic Protection	Predict the direction of oncoming traffic when turning and brake early.
Night-Time Driving	Drive normally at night.
Rain/Fog Environment Resistance	Drive stably in light rain/fog conditions.
Environmental Feature Recognition ability	Positioning of self-driving vehicles through feature points within 5m~10m.
Application Scenarios	Travel through outdoor areas (network communication must be smooth).
Route Complexity and Switching	Switch between multiple routes without stopping stops.