

Tika Digital Key

Shanghai INGEEK Technology Co., Ltd.

Pioneer of ICV Technologies

Enabling Security, Intelligence, Connectivity Between People and Vehicle

Company Profile

Company Profile

INGEEK is the World's #1 Digital Key Solution Technology Provider

> 40%¹

Market Share

With 50+ cooperative OEMs, No.1 digital key market share ranks , 200 mass-produced vehicle models, 2.2 million+ unit.

230+

Vehicle Models

Achieve integrated mass production of software and hardware

3.1M+²

Units In Use

Seamless integration with new and old vehicle platforms and mobile devices.

140+

Patents & IPs

Industry's No. 1 in proprietary software and hardware patents covering the full technology stack

Mission and Vision

- Digital mobility transformation for OEMs
- Connectivity Standards and Technology for Customers

Target Customers

- Chinese-OEMs, International-OEMs, Tier-1 Suppliers, and Ecosystem Partners

Product Offering

- INGEEK Intelligent Connectivity System (ICS)
- Automotive Digital Key
- DK Hub (Connectivity Platform)

¹ According to GGII 2022 Market Research for Registered Vehicles

² Aggregate count, including both Preloaded and Aftermarket Solutions

Innovative and Secure Solution Provider

Standards and Specifications



IP and Patents



HW Modules

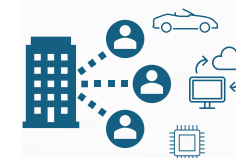


Positioning Chip



Security chip

Preloaded / Aftermarket Solutions + Ecosystem Services



“Seamless Connectivity”



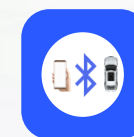
Cross-boundary

Implemented for over
200+ models



Smart Phone Compatibility

Compatible with all
mainstream smart
phones on iOS and
Android



Interconnectivity

Supports all near-field
communication protocols:
Bluetooth, NFC, UWB



Provision and Authorization

Managed vehicle and
access solution by space,
time, and function

INGEEK Showroom



- Left: VW ID.4 with INGEEK aftermarket DK installed
- Right: Various hardware modules developed by INGEEK, including Vehicle Control Units, Communication Units, T-boxes, and eSE (embedded secure element)

Client Marquee

Over 50+ Nominations Awarded

20+

I-OEMs

30+

C-OEMs

6+

Emerging EV
OEMs

 Audi 一汽-大众 Aftermarket	 PORSCHE Aftermarket	 LEXUS Full Product Line	 HONDA Preloaded	 Ford Aftermarket	 上海通用汽车 SHANGHAI GM Aftermarket	 ALFA ROMEO Aftermarket	 长城汽车 Great Wall Motors Preloaded
 一汽-大众 Aftermarket	 LOTUS NYO Security	 广汽丰田 品质感动世界 Full Product Line	 NISSAN POC	 LINCOLN Aftermarket	 CADILLAC Aftermarket	 Jeep Aftermarket	 HAVAL Preloaded
 SAIC VW Aftermarket	 MG POC	 一汽丰田 Full Product Line	 广汽埃安 GAC AION Preloaded	 广汽传祺 Preloaded	 上汽通用五菱 SGMW POC	 WEY Preloaded	 TANK Preloaded
 Aftermarket	 VOLVO Security	 广汽丰田 Full Product Line	 吉利汽车 GEELY AUTO Preloaded	 一汽奔腾 BESTUNE Preloaded	 DFM Preloaded	 红旗 Preloaded	 上汽大通 MAXUS Preloaded
 Full Product Line	 哪吒汽车 Preloaded	 岚图 Preloaded	 IM 智己汽车 Preloaded	 欧拉 Preloaded	 CHERY Preloaded	 HiPhi 合合 Preloaded	 蔚来 NIO Security

Legend: Aftermarket Preloaded POC Security

Aftermarket

Preloaded

POC

Security

Our Service Network



- Highly experienced **technical service** team accompanies our reps to serve clients worldwide
- **R&D and hardware production facility** in China
- R&D & Testing **Center of Excellence** dedicated for **Toyota** in Japan

Tika Digital Key Product

Product Functionality

Get ready to **unlock**
your Porsche driving
experience with our
digital key!



***Real-time Vehicle
Connectivity***

Rapid Response

SWAG and Snappy App

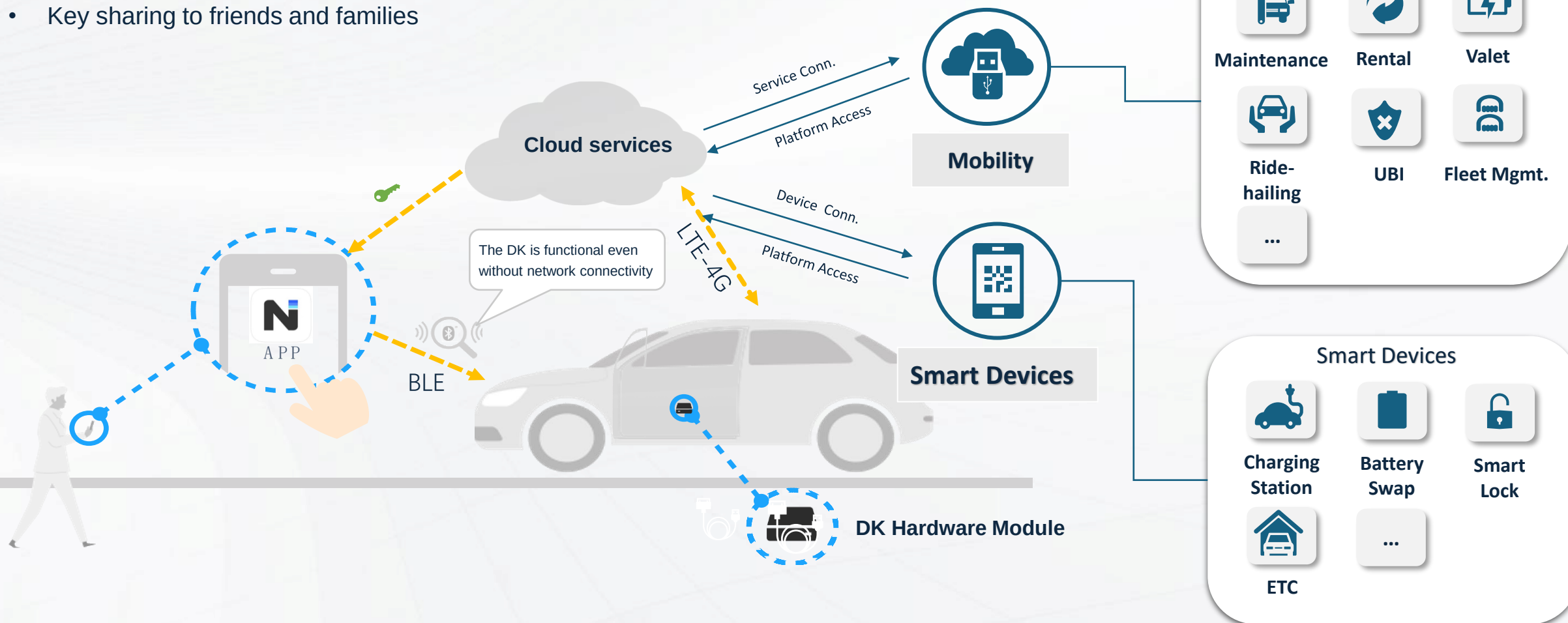
Digital key usage scenarios:

- Access doors/trunk
- Open/close windows
- Remote Engine Start
- Find My Car – Flash & Honk
- AC control
- Vehicle status checking
- Vehicle positioning
- Key Sharing

Click the image above to play a DEMO

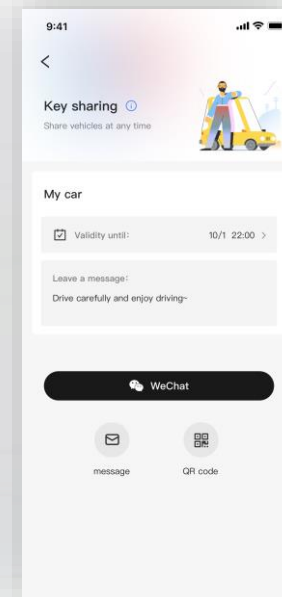
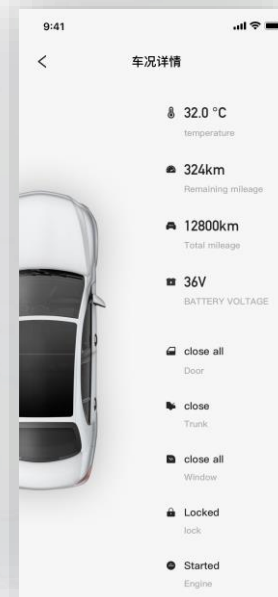
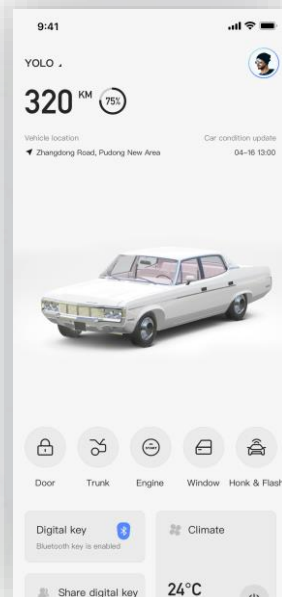
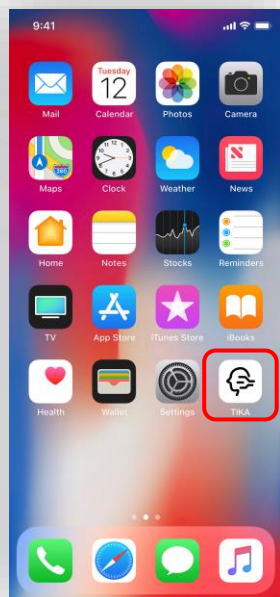
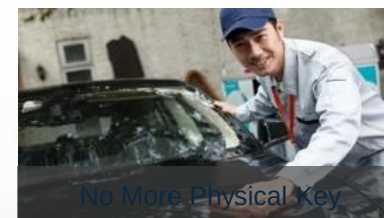
What is Digital Key for Vehicles?

- Digital Key uses the smartphone to perform the same functions as a car key
- Vehicle-specific hardware module is installed in-car (does not damage OEM wires and panel trims)
- Customer can perform vehicle control functionalities using Bluetooth, or 4G network for remote control
- Smart Access capable, walk away to lock and approach to unlock automatically
- Key sharing to friends and families



Simplifying Vehicle Control with Tika

- Keyless Experience: unlock or lock your car with your phone in the pocket
- Remote A/C control to enjoy a pleasant temperature as soon as you enter the vehicle
- Real-time vehicle status monitoring, in case you forgot to lock the vehicle or windows



Aftermarket - Supported Models

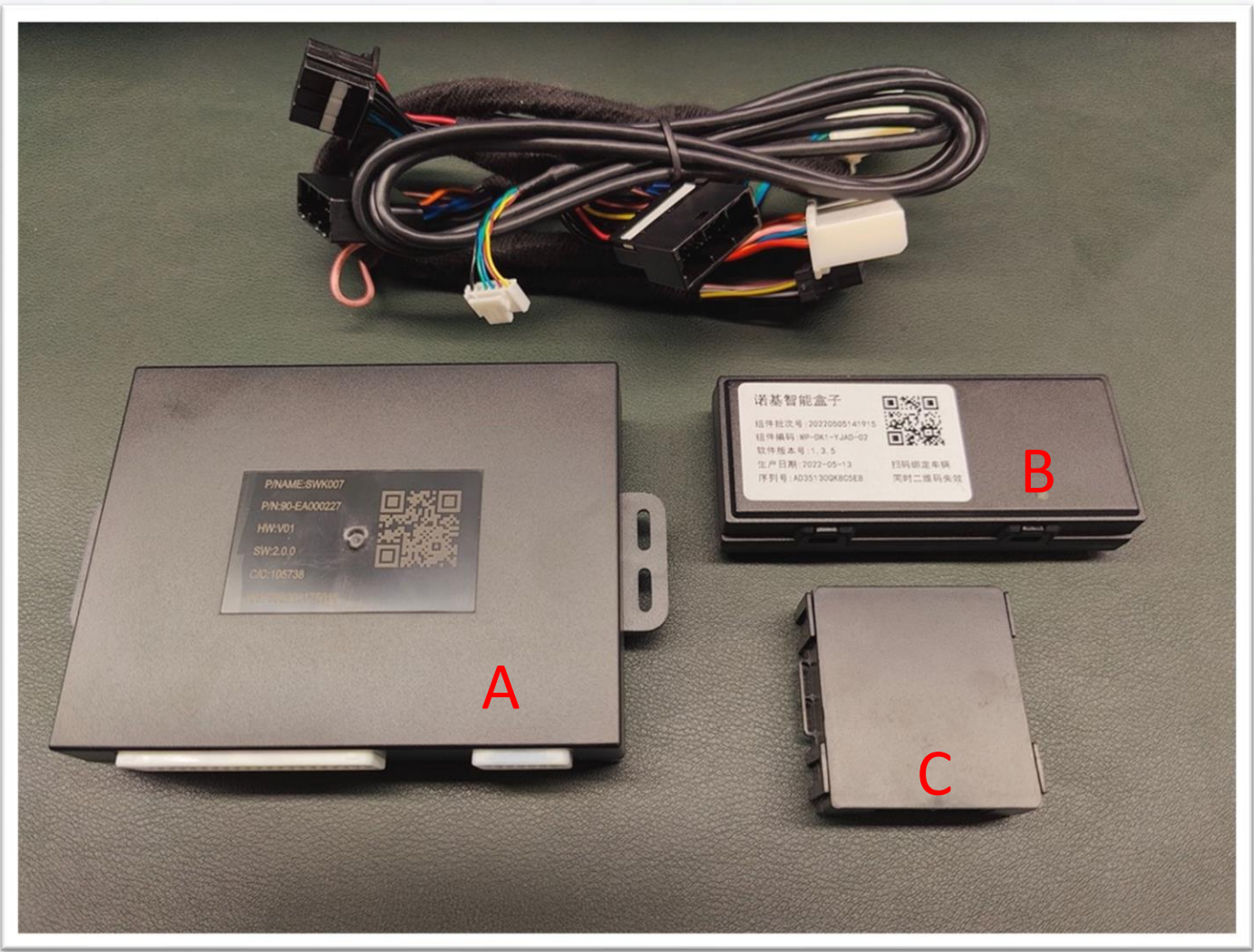
Adapted for 7 major makes, over 200+ models



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More models are being adapted, as long as you have the need, we can fulfill it.

Product Modules



A	Vehicle control module
B	Communication module
C	Fob Box
D	Cable & wires

Function Overview

Short Range Control by BLE	Support
Unlock/Lock the door	Yes
Roll down/Roll up all windows	Yes
Start/Stop the engine	Yes
Flashing lights and honking the horn	Yes
Open/close the tailgate	Yes
Turn on/Turn off the air conditioning, Set the AC to Auto mode, Increase/decrease the temperature.	Yes
Remote Control by 4G ¹	Support
Unlock/Lock the vehicle	Yes
Roll down/Roll up all windows	Yes
Start/Stop the engine	Yes
Flashing lights and honking the horn	Yes
Open/close the tailgate	Yes
Turn on/Turn off the air conditioning, Set the AC to Auto mode, Increase/decrease the temperature.	Yes
Check the vehicle's status information, including interior temperature, engine status, door status, lock status, window status, trunk status, remaining fuel/battery range, odometer, and aux battery level.	Yes ²
View the real-time location of the vehicle, Retrieve the vehicle's travel history	Yes

1. The product adopts the FiboCom LTE CAT.1 L610 + SIM by JT Velos solution, which supports use in the Middle East

2. The available vehicle status information may vary between different vehicles; for example, fuel level is available for ICE while State of Charge is available for EVs

Installation Guide



- Illustrated installation guide for VW vehicles
- Does not damage OEM wires, does not affect the vehicle's warranty, reversible installation, no safety risks, Toyota models do not require OEM key

Technical Specification

1. Bluetooth communication delay: < 200ms @ typical open environment
2. 4G remote communication delay: < 1s @ typical open environment
3. Bluetooth lock & smart unlock distance:
 - 3.1 lock distance: >5m (+/-2m) @ open environment with phone on hands
 - 3.2 unlock distance: <3m (+/-2m) @ open environment with phone on hands
4. Bluetooth lock & unlock accuracy:
 - 4.1 lock: 5m @ 1σ ; >7m @ 3σ
 - 4.2 unlock: 3m @ 1σ ; <1m @ 3σ
5. 4G remote locating precision: N/A, for remote control only
6. 4G remote locating accuracy: N/A, for remote control only
7. Product package rated voltage: 12V
8. Product package maximum voltage range: 9V~16V @ normal operation; 6V~18V @ communication
9. Product package power: < 12W @ 12V
10. Product electricity (separate if diff for each module): refer to DV standard
11. Working temperature: -30°C ~+85°C
12. Communication protocol:
 - Bluetooth: $\geq$ BLE 4.2
 - 4G: CAT.1

Client Cases

Car Rental Client Case

Smart Mobility Transformation for Vehicle Rental Process

- Fully automatic customer experience from booking to return
- DK Cloud is used to link up external mobility services such as payment systems and driver's license verification system
- Return Process: vehicle parameters such as mileage and fuel level is automatically recorded



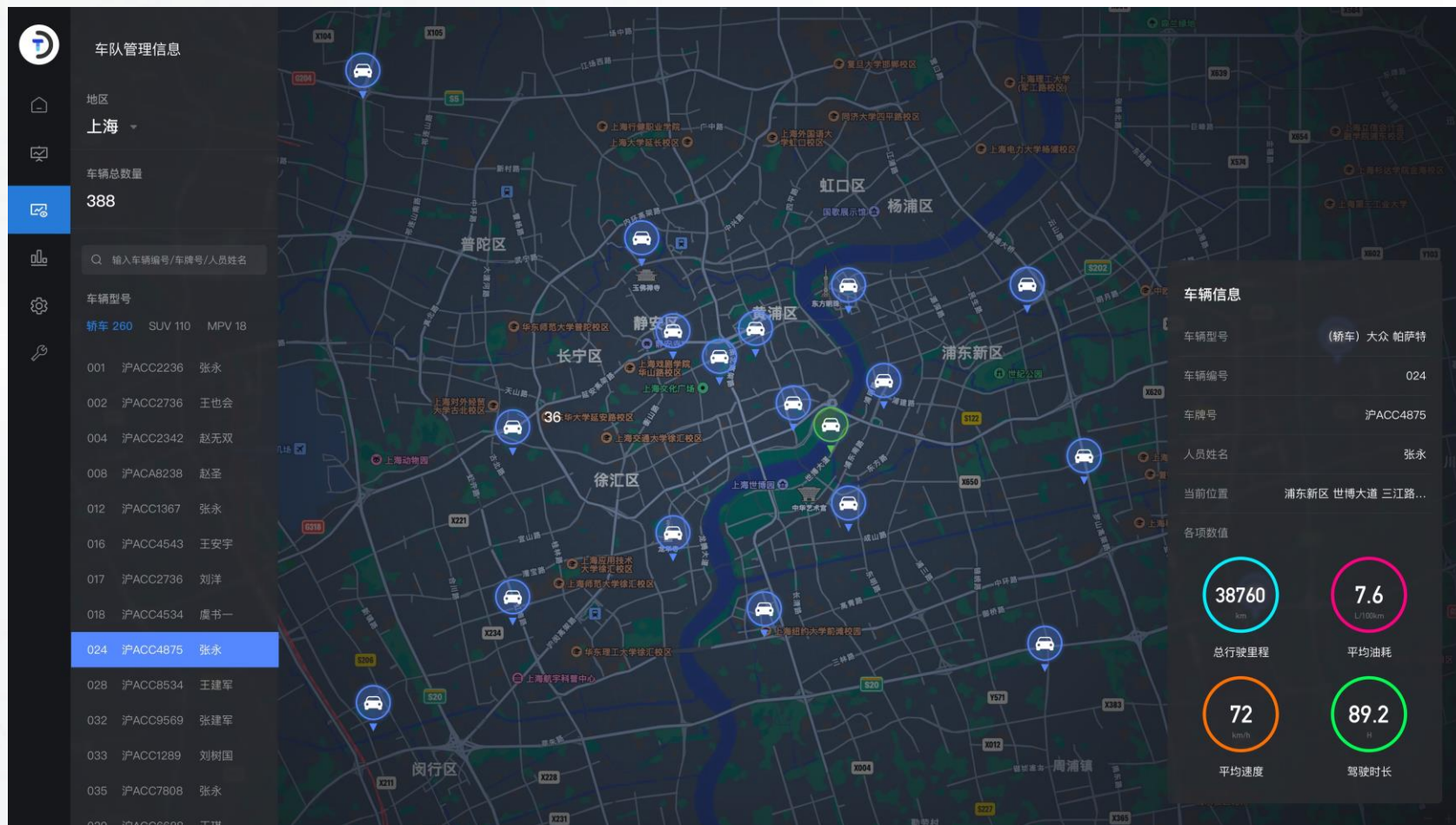
Pick-up Process



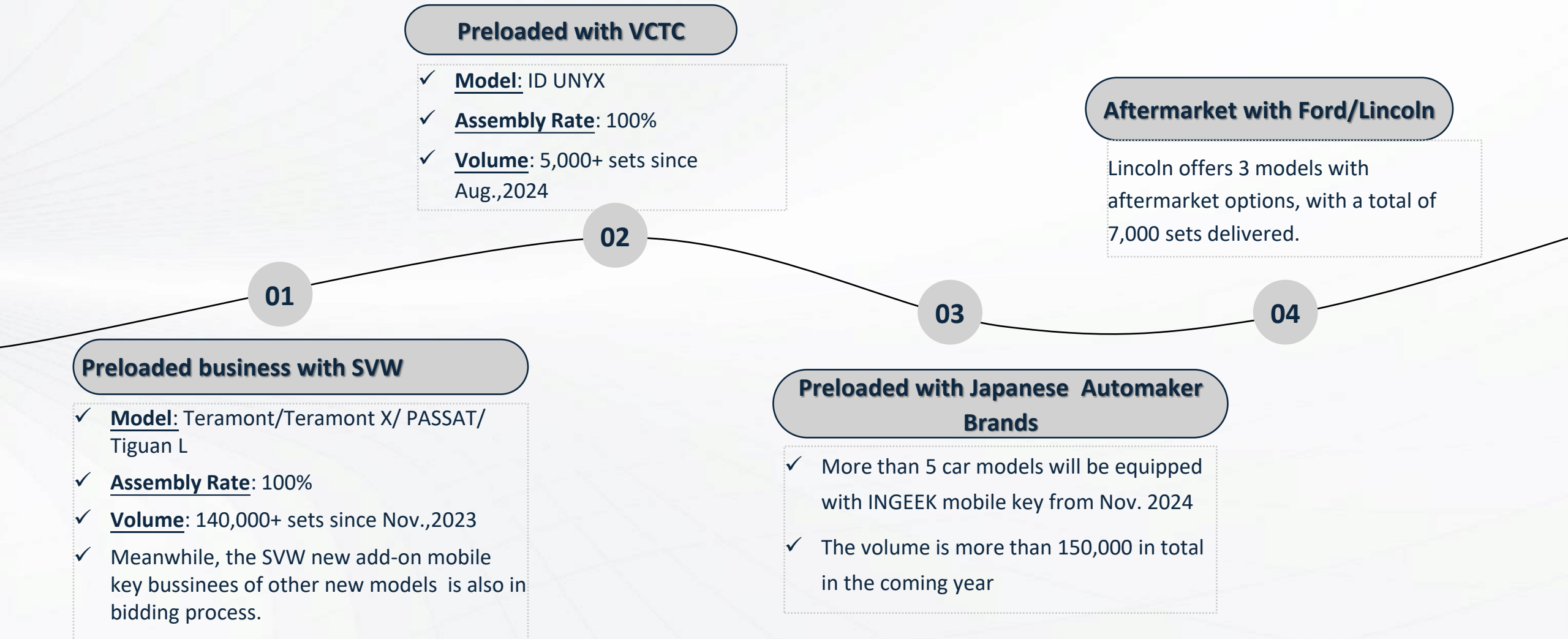
Fleet Management Client Case

Server-based fleet management using digital key

1. Remote Vehicle Unlocking and Starting
2. Driver Identity Verification and Authorization
3. Real-Time Vehicle Tracking
4. Vehicle Usage Reporting
5. Vehicle Maintenance and Fault Alerts
6. Driver Behavior Management
7. Hours of Service Compliance

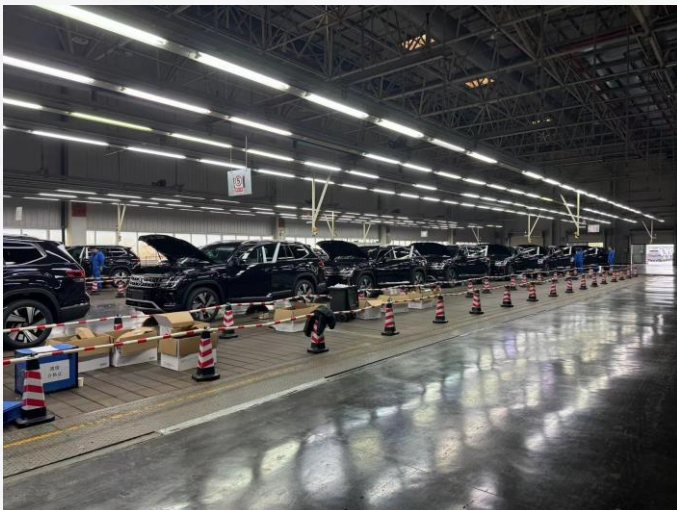


Aftermarket / Preloaded Business Landscape



* Bentley/ Lamborghini global team is currently discussing the possibilities of aftermarket digital key with Tika

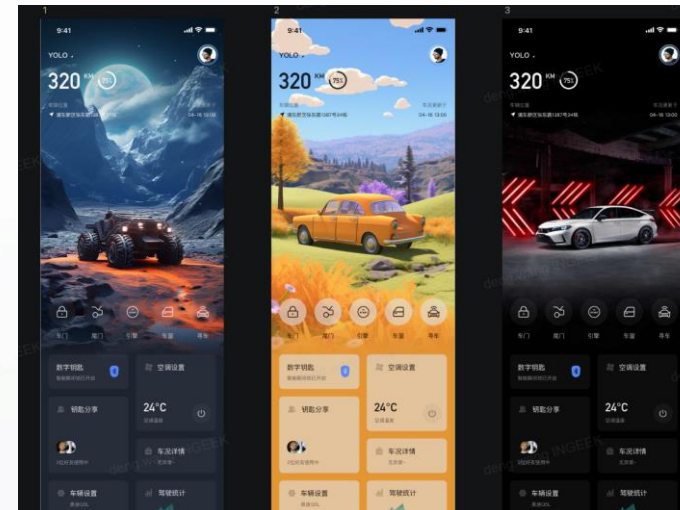
Market-proven and Time-tested Product



Shanghai Volkswagen and Anhui Volkswagen are already preloading the TIK digital key at production line. TIK has been tested and certified under the VW 80000 OEM standard, with more than 100,000 install base.



Our products are manufactured by Luxshare Precision, which is also one of Apple's largest contractor manufacturers globally.



We are committed to innovation and re-innovating our products. We will continue to update and iterate our products to provide users with the ultimate experience.

THANKS

we say what we do, we do what we say