

Global Leader in Space-Time Intelligence

ASENSING



ASENSING

Vision & Mission

Accelerate physical AI through accuracy-first space-time intelligence infrastructure.



First China-made
auto-grade MEMS
inertial chip



First to use ceramic
hermetic packaging



First-of-its-kind SOTIF
architecture



Global leader in
automotive deploy-
ment volume



First to mass deliver
auto-grade high-prec-
ision positioning
solutions



First to deliver million
units of products



Industry's first smart
plant & biggest
capacity



First solution provider
for global OEMs

About ASENSING

ASENSING specializes in Positioning, Navigation, and Timing (PNT) technologies.

Guided by its mission to "accelerate physical AI through accuracy-first space-time intelligence infrastructure," the company delivers high-precision positioning and attitude sensor solutions for intelligent machines.

As a global leader in space-time intelligence, ASENSING builds the "vestibular system" for intelligent machines through full-stack solutions spanning inertial chips, advanced modules, and integrated systems. These capabilities enable machines to perceive position and attitude accurately, facilitating seamless interaction with the physical world.

Leveraging comprehensive in-house capabilities - from core MEMS chips, algorithms, and software to precision engineering and smart manufacturing - ASENSING serves key industries including automotive, robotics, industrial machinery, and renewable energy systems.

Founded in 2014 and headquartered in Guangzhou, ASENSING operates domestic branches in Beijing, Shanghai, and Jiangsu Province, along with global teams in Germany, Japan, and the US.



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Main Customers



Rongxi Li
Founder & Chairman

- Nearly 20 years of experience in navigation and positioning R&D
- Developed a variety of sensors and solutions from scratch
- The first to apply high-precision inertial navigation to intelligent driving



Pia Hu
CEO

- 15 years of experience in ADAS&AD product development in automotive industry
- Director of ADAS Products and Head of Programm at Continental Germany
- Chief Product Officer at SAIC and responsible for the AD development



Prof. Yan Su
Chief Scientist

- 30 years of experience in the MEMS sensor industry
- PhD, Professor of Nanjing University of Science and Technology
- Reviewer of Major Projects of the Ministry of Science and Technology

Awards



**National
High-tech Enterprise**

★★★



**Guangdong Provincial
Green Factory**

★★★



**Top 50 Emerging Enterprises
in Smart Sensors**

★★★



**Specialized, Refined,
Differential, and Innovative
"Little Giant" Enterprise**

★★★



**Gaogong
Golden Ball Award**

★★★



**AutoTech Breakthrough
Awards-the Overall Auto Sensor
Company of the Year**

★★★



**Guangdong Provincial
Advanced Smart Factory**

★★★



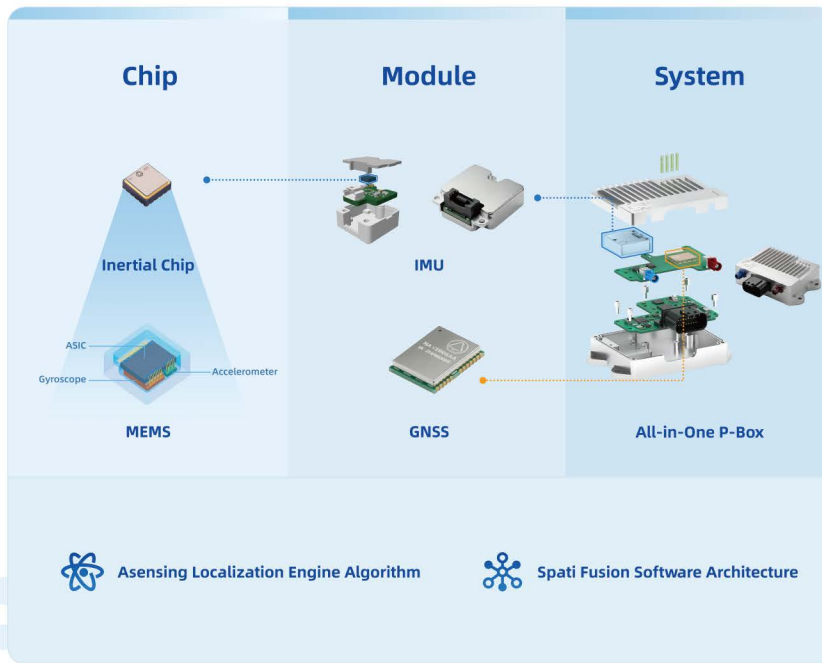
**Gasgoo Award
(Top 100 New Supply Chains in
China's Auto Industry)**

★★★



**Human Resources Management
Excellence Award
(Outstanding Employer)
DEI Employer Award**

★★★



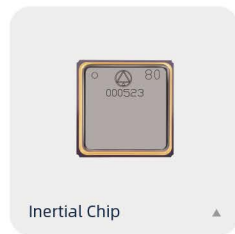
Our competitive advantage lies in a proprietary full-stack ecosystem encompassing core chip capabilities, algorithms and software, product design, and precision engineering.

Our inertial chips combine autonomous-grade precision with automotive-grade safety and reliability.

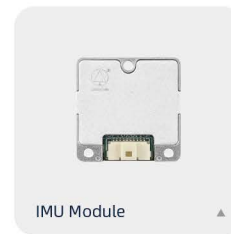
The Asensing localization engine leverages advanced computational techniques and continuous refinement to deliver high-precision positioning, velocity, timing, and attitude across diverse applications. The modular Spati Fusion software architecture enables cross-platform deployment, allowing rapid and cost-effective integration.

We have established a fully digitalized, vertically integrated manufacturing system capable of producing high-performance inertial sensors at scale and competitive cost. Through precision engineering and smart manufacturing, we ensure consistent product quality and reliability.

Main Products



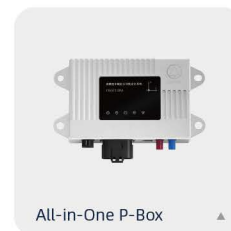
- High Stability Across the Full Product Lifecycle
- AEC-Q100 (Grade 2)
- Functional safety ASIL-D



- High-precision
- Life-cycle stability
- Modular solution
- Full calibrated
- Functional safety ASIL-B(D)



- Full-constellation
- Full-band
- Highly integrated
- Anti-spoofing & anti-jamming
- Functional safety ASIL-B



- High precision
- Life-cycle stability
- Multi-input data fusion
- Customized and off-the-shelf product
- Functional safety ASIL-B

Highly Automated Production

Our precision engineering and advanced manufacturing expertise enables high-volume production of high-performance sensors at optimized costs. By integrating intelligent automation, stringent vertical control, and advanced calibration systems, we qualify every component to meet the rigorous reliability standards of automotive and industrial applications.

As the first in China to achieve full in-house control over million-unit-scale manufacturing, we now operate the largest production scale in the industry.

- Geometric alignment of each module within 0.05°
- Precision turntable featuring 0.0001° angular accuracy, integrated with a thermal chamber for calibration
- Real-time visualization and end-to-end traceability.
- Assembly yield exceeding 99%.
- OEM field return rate below 20 ppm (post-sale).

Comprehensive production & quality system



ANSI/ESD S20.20

ASPICE

IATF 16949

ISO 45001

ISO 50001

ISO 9001

ISO 14001

ISO 21434

ISO 21448

ISO 26262 (P-Box, IMU, Chip)

RSCI Full Label

TISAX

VDA 6.3

Laboratory

The first CNAS-accredited laboratory in the space-time intelligence solutions industry.

600⁺ m²

The lab is equipped with advanced instrumentation, including CT scanners, centrifuges, and 3-axis temperature-controlled turntables:

- Testing capabilities: Over 120 standards covering electromagnetic compatibility (EMC) and environmental reliability for automotive electronics.
- Comprehensive support: Provides full technical support for analysis and validation experiments - from trial runs to mass production.
- Open services: Offers testing services to customers and partners.

120⁺

Testing items

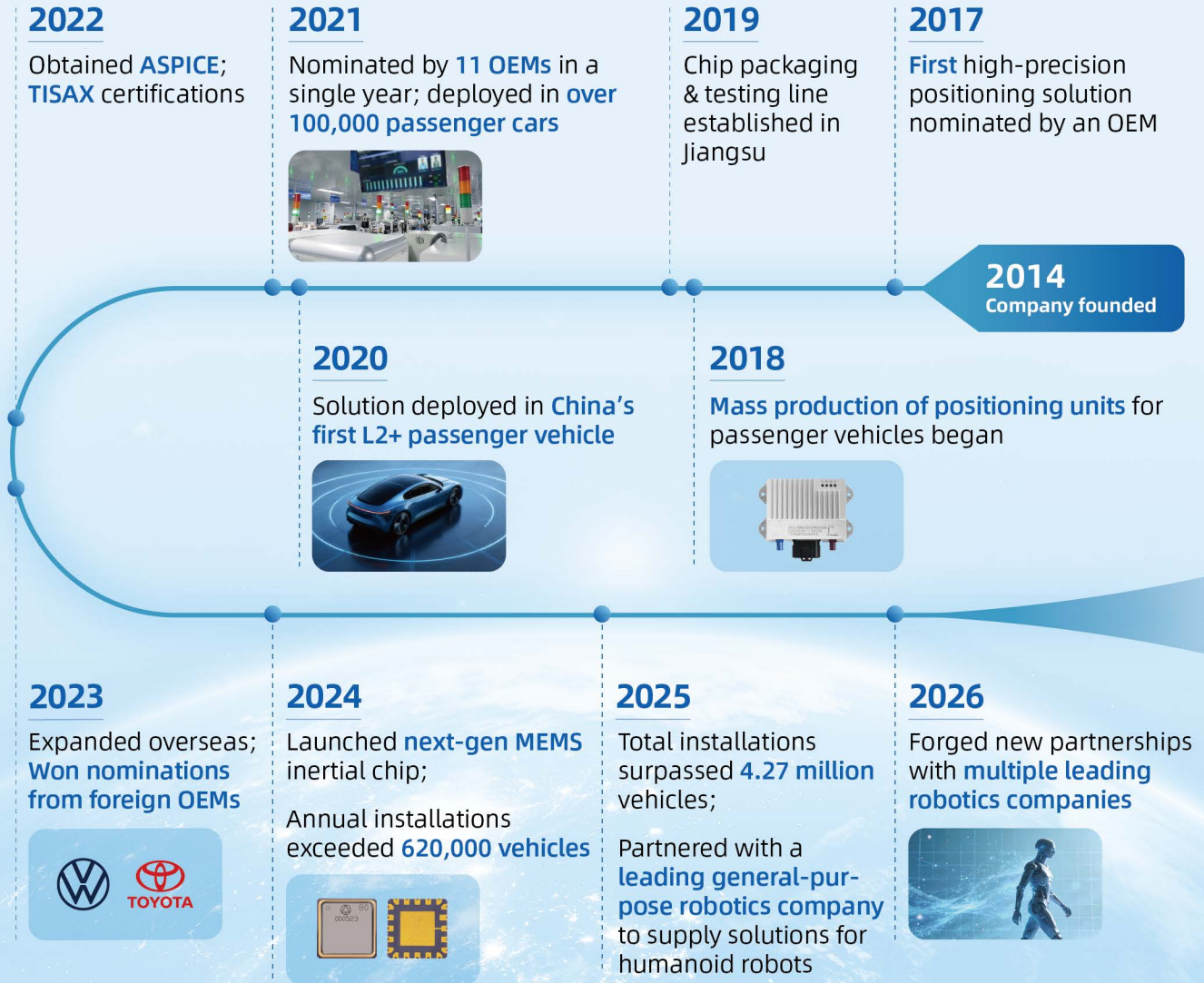
150⁺

Equipment units

- ▶ CA-SLA Lab Certification from Changan
- ▶ Laboratory Capability Recognition from Li Auto



Company History & Global Layout



Four Major Industry Applications

Building on our success in the automotive sector, we are accelerating the adoption of our technology in new domains, including robotics, industrial machinery, and renewable energy systems.

Our solutions serve as the "vestibular system" for intelligent agents, enabling humanoid robots to walk, industrial machines to operate autonomously, and renewable energy systems to align components with precision.

We are committed to advancing the physical AI transformation by delivering scalable, safe, and cost-efficient space-time intelligence solutions worldwide.



Vehicle



The automotive market is our core strategic focus and primary application area.

With the rapid advancement of intelligent driving, vehicles face stringent requirements for continuously and reliably sensing their precise position and orientation. Our automotive solutions are designed to meet this critical need, delivering a stable and accurate space-time reference that serves as a fundamental component of vehicle intelligent driving systems.

We offer flexible product formats — all-in-one plug-and-play systems for customers seeking rapid deployment, and core modular components for deep customization by those with strong in-house R&D capabilities.



Company A — Strategic Partnership Built on Flexible "1+1" Combination Solution

Company A, a leading NEV manufacturer, sought reliable, adaptable positioning solutions that could scale across its intelligent driving vehicle lineup. We customized our flexible "1+1" combination solution according to its system configurations, supplying automotive-grade IMU and GNSS modules across its product line, along with in-depth software support and technical guidance. Our team worked closely with their R&D team to integrate our modules into their diverse computing platforms. This collaborative model enables the customer to achieve deep, rapid integration into their own hardware while ensuring optimal performance.



Company B — Empowering Intelligent Driving Platform with P-Box Integrated System

Company B, another leading NEV manufacturer, needed a versatile, scalable high-precision positioning solution to support its intelligent driving platform across its brand matrix, from mainstream to premium models. We provided our P-Box integrated system as a comprehensive solution, proactively engaged in technical integration, and delivered intensive on-site technical support. The collaboration covers multiple vehicle models and supports L2 to L2++ intelligent driving functions. We successfully achieved large-scale delivery of P-Box systems across customer platforms, including hybrid and pure electric models.

Robotic

We provide solutions, primarily IMU and GNSS modules, for various robotic systems.

Embodied Robot

high-dynamic, low-latency IMU modules for humanoid robots, robotic dogs, and wheeled robots. Enable real-time full-body pose estimation, serving as an artificial "vestibular system" that supports dynamic balance, agile movements, and navigation on uneven terrain.

Mobile Robot

IMU and combined navigation products for AMRs, AGVs, logistics carts, and yard care robots. Enable seamless and reliable positioning and orientation tracking across indoor and outdoor environments, accelerating automation in logistics, warehousing, and yard care industries.

Unmanned Vehicle

Customized high-precision positioning solutions for logistics delivery and sanitation vehicles. Address challenges in complex environments such as industrial parks and university campuses, including GNSS signal degradation and visual perception blind spots.

L4 Robotaxi

High-reliability space-time intelligence solutions for L4 autonomous vehicles, meeting stringent requirements for system stability and safety. Provide essential robustness and longevity while building critical redundancy alongside other sensors to support safe and efficient operation within defined ODDs.



Company C — Multi-IMU Fusion for General-Purpose Robotics



Company C is a leading developer of general-purpose robots focused on embodied intelligence and multi-modal large models. Its products serve unmanned retail, industrial logistics, home healthcare, and education. We leveraged our automotive-grade IMU expertise to build a dedicated R&D system and a multi-precision IMU portfolio – from high-precision "6-axis + magnetometer" modules to standard 6-axis modules. These can be integrated into robot heads, torsos, waists, and chassis. The magnetometer-equipped IMU enables magnetic north detection and satellite-free navigation, while a separate chassis-mounted IMU assists with balance control.

Our solution delivers real-time, high-stability attitude data through modular, adaptive deployment, enabling precise motion perception and feedback – significantly enhancing robot balance, coordination, and positioning accuracy in dynamic environments.

Smart Machinery

Capitalizing on the flexibility and performance of our product portfolio, we provide solutions – primarily in all-in-one P-Box form – to intelligent machinery industrial and emerging sectors.



Smart Agriculture

Precise positioning and attitude control for robotic lawnmowers and agricultural machinery, enabling automated tilling and harvesting along predefined paths — improving efficiency while reducing labor and operational costs.

Smart Forklifts

IMUs to provide accurate attitude measurement, ensuring stable operation in high-dynamic warehousing and logistics environments, directly enhancing efficiency and safety.

Smart Mining

Robust combined navigation systems and inclinometers for mining automation, enabling autonomous trucks to achieve centimeter-level path tracking and precise attitude control – addressing high operational risks, labor costs, and operational complexity.

Construction & Port Machinery

Precise positioning and motion control for heavy equipment such as cranes, enhancing safety and efficiency while enabling automation of complex lifting and transport tasks.

Marine Solutions

Robust attitude and position information for vessels and platforms, supporting navigation, dynamic positioning, and equipment stabilization. High-performance IMU-based tilt sensors enable satcom-on-the-move antennas to maintain satellite lock through real-time attitude and heave measurement, ensuring uninterrupted communication for navigation, operations, and crew welfare.



Company D — Enabling Scalable Autonomous Mining Truck Deployment with High-Precision Positioning

Company D is a leading provider of engineering transport solutions. Mining operations face harsh challenges including extreme temperatures, heavy rain, rapidly changing terrain, narrow roads, sharp turns, and signal obstruction.

We deployed our P-Box integrated system for Company D's fleet of autonomous mining trucks. The P-Box integrates automotive-grade GNSS and IMU modules, delivering continuous centimeter-level positioning and complete attitude information even when satellite signals are compromised in canyons, on sharp turns, or in adverse weather. It has undergone rigorous testing – including high-temperature operation, thermal shock, and powered thermal cycling – to simulate extreme conditions in mining areas like Inner Mongolia, ensuring stable and reliable performance throughout its lifecycle. With our P-Box system, Company D has achieved commercial deployment of autonomous mining trucks across multiple sites in Inner Mongolia and Guangxi, accelerating the upgrade of mining operations toward greater safety and intelligence.

Energy Systems

In the renewable energy system sector, our solutions, provided mainly in the form of IMU modules, contribute to the intelligent operation and maintenance of critical infrastructure.



Wind Power Solutions

In the wind power industry, our solutions utilize IMU products and high-precision inclinometers to provide accurate tilt measurement for wind turbine towers and blades. This critical intel is fundamental for enabling intelligent operation and maintenance, condition monitoring, and optimizing power generation efficiency. Our IMU modules, calibrated to perform reliably in harsh outdoor environments, provide the necessary intel to guide blade adjustments during high winds to reduce risk or optimize blade angles during low winds to improve efficiency.

PV Solutions

Our solutions, based on our high-precision IMU modules, provide precise control and monitoring for solar power and photovoltaic generation facilities. This capability is critical for continuously optimizing the tracking angle of solar panels to maximize energy harvest. This is primarily used to optimize the tracking angle of solar panels and to enable the autonomous operation of maintenance robots, thereby maximizing energy yield.

Water Conservancy Solutions

Our solutions are typically applied to the real-time monitoring of subtle structural shifts and deformation of large-scale structures such as dams as well as water flow changes. By delivering continuous and precise measurement data, our technology enables proactive risk mitigation and helps ensure the operational safety of water management assets.

Company E – IMU Modules Enhancing Wind Power O&M



The customer, a leading wind power operations provider, faced challenges with inefficient manual inspections and high safety risks. We supplied high-reliability IMU modules installed in turbine nacelles to collect real-time acceleration and angular velocity data, enabling intelligent monitoring of turbine operational status. The system provides timely warnings – guiding blade adjustments during high winds to reduce risk, or optimizing blade angles during low winds to improve power generation efficiency.

This successful mass deployment validates our extension of high-precision sensing technology from automotive to renewable energy systems. Built on millions of automotive-grade sensor deliveries, our IMU modules meet the stringent performance and reliability requirements of the power industry, demonstrating the versatility and scalability of our technology platform for broader industrial applications.

Cooperation & Customer Service

Automotive Partners



Non-Automotive Partners





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