

— HUAYUAN GROUP

Huayuan Jinbo Technology Co. Ltd.

**Advanced Sensor Development,
Packaging & Manufacturing Solutions**

From Sensor Concept to Industrial Production

☀ NATIONAL HIGH-TECH ENTERPRISE

☀ MEMS SENSORS

🏠 HUAYUAN GROUP



SENSOR MANUFACTURING EXCELLENCE

Who We Are

NATIONAL HIGH-TECH ENTERPRISE



National High-Tech Enterprise

Officially recognized for advanced R&D capabilities in sensor technology and precision engineering. Top 500 Chinese Enterprises.



Part of Huayuan Group

60+ wholly-owned and holding subsidiaries large-scale industrial ecosystem with long-term investment capacity. Generated an annual operating revenue of 55 billion RMB (approximately \$7.6 billion USD, 2025)



51 Patents, Patent Demonstration Enterprise

11 invention patents, 37 utility model patents, 3 design patents, 5 software copyrights.



National "Little Giant" Specialization & Innovation

Recognized for deep specialization in sensor packaging, testing, and MEMS development.



Provincial R&D Center

Established research center supporting sensor design, customization, and industrialization programs.



International Partnerships

Active collaborations with companies from Japan, South Korea, France, and the United Kingdom.



Company Headquarter in Zhejiang China
Top 500 Chinese enterprises

KEY FIGURES

>51

Total Patents Held

60+

Group Subsidiaries



Why Customers Work With Us



Design Capability

- MEMS sensor development & customization
- Sensor packaging & chip design
- Custom sensor specification support
- Provincial R&D Center established

From concept to validated design



Manufacturing Capability

- 5,000 m² cleanroom production facility
- Automated die bonding & wire bonding
- Eutectic bonding & laser welding
- Scalable automated production lines

Precision assembly at volume



Testing & Calibration

- Pressure, vibration & acceleration calibration
- X-ray inspection & 3D AOI systems
- Environmental chambers: temp, humidity, vibration
- Push-pull force, surge & impact testing

Full reliability validation in-house



Industrialization Capability

- Prototype to mass production pathway
- Target: 25 million sensors/year by 2028
- 18.2 ha reserved industrial land for expansion
- Long-term manufacturing partnership model

Built for long-term supply security

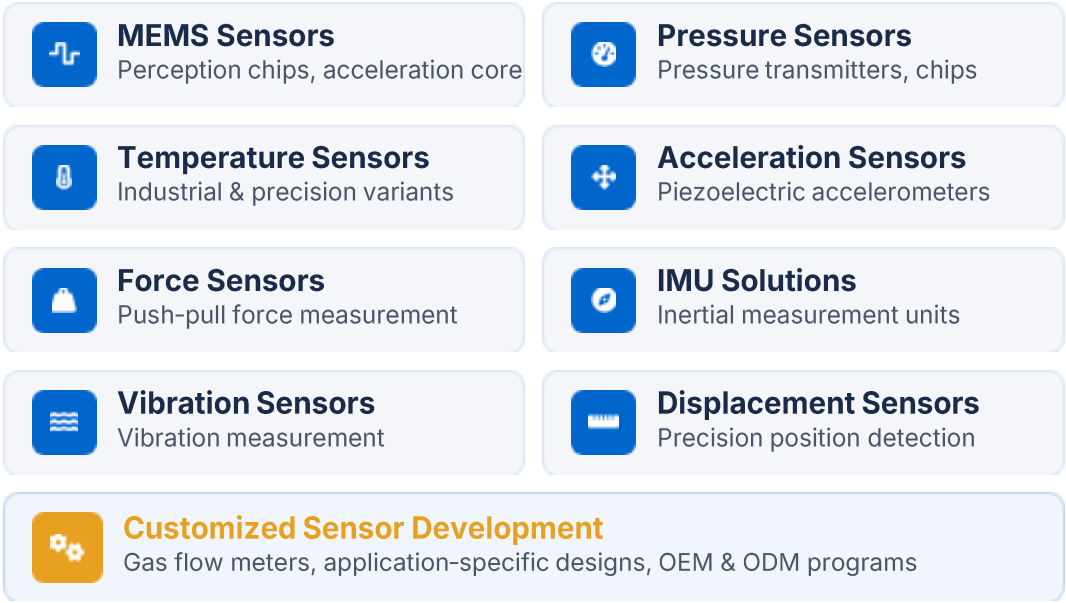


Our Sensor Ecosystem

VALUE CHAIN



SENSOR PORTFOLIO



PACKAGING TECHNOLOGY PLATFORMS

Metal Packaging

PLATFORM 01

Chip Design > Casing Cleaning > Die Bonding > Wire Bonding > Inspection > Lid Sealing > Marking > Testing > Shipping

Ceramic Packaging

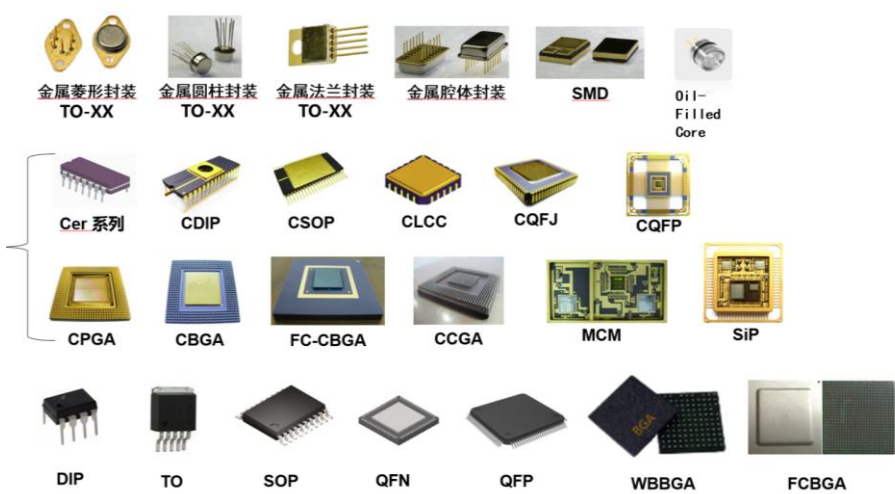
PLATFORM 02

Chip Design > Housing Cleaning > Die Bonding > Plasma Cleaning > Wire Bonding > Inspection > Lid Sealing > Marking > Testing > Shipping

Plastic Frame Packaging

PLATFORM 03

Chip Design > Die Bonding > Wire Bonding > Molding > Curing > Surface Treatment > Lead Trim & Form > Marking > Testing > Shipping



KEY EQUIPMENT CAPABILITIES

- Die Bonding

Fully automatic die bonders | Eutectic bonding equipment | Piezoresistive welding
- Wire Bonding

Fully automatic wire bonders | Automated gold wire bonders
- Sealing & Welding

Laser welding systems | Lid sealing for metal & ceramic packages
- Surface Cleaning

Plasma cleaning systems for ceramic & metal substrates
- Inspection & Metrology

3D AOI | X-ray inspection | High-precision optical microscopes

KEY MACHINES

- Auto Die Bonder
- Gold Wire Bonder
- Laser Welder
- Plasma Cleaner
- 3D AOI
- X-Ray
- Optical Microscope

Quality & Reliability

 BUILT FOR AUTOMOTIVE & INDUSTRIAL ENVIRONMENTS

 INTERNATIONAL MANAGEMENT SYSTEM CERTIFICATIONS



IATF 16949:2016
Automotive Quality
Automotive quality management system for sensor production processes and supply chain.



ISO 9001:2015
Quality Management
International standard for quality management systems across all manufacturing operations.



ISO 14001:2015
Environmental Management
Environmental management system ensuring sustainable and responsible manufacturing practices.



ISO 45001:2018
Occupational Health & Safety
Occupational health and safety management system for a safe production environment.

 COMPREHENSIVE TESTING & VALIDATION CAPABILITIES



Vibration & Shock Testing
Dynamic Validation
Low & high-frequency vibration systems, impact testing for mechanical reliability validation.



Pressure & Calibration
Sensor Accuracy
Automatic pressure calibration systems, pressure pulse cycle testing, push-pull force validation.



Environmental Testing
Climate & Humidity
Three comprehensive climate chambers for temperature, humidity, and combined stress testing.



Inspection Systems
Defect Detection
X-ray inspection, 3D AOI, spectrum analyzer, profilometer, and 7.5-digit precision multimeter.



Quality Philosophy: Zero Defects



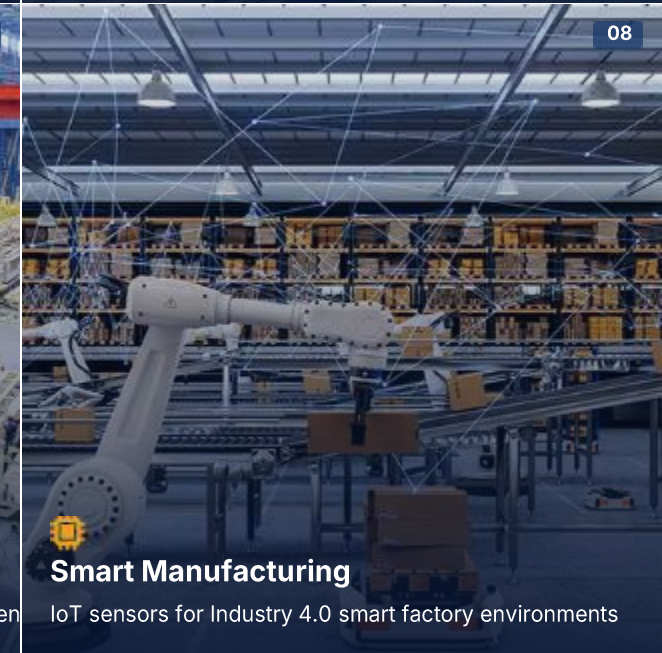
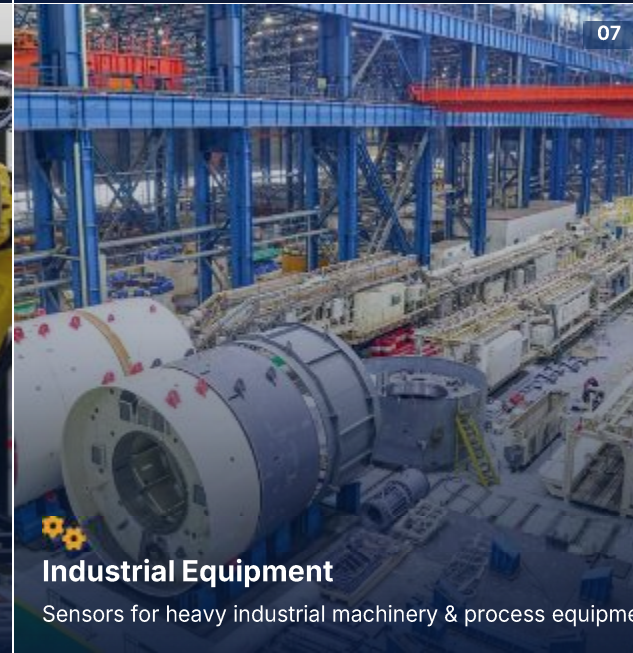
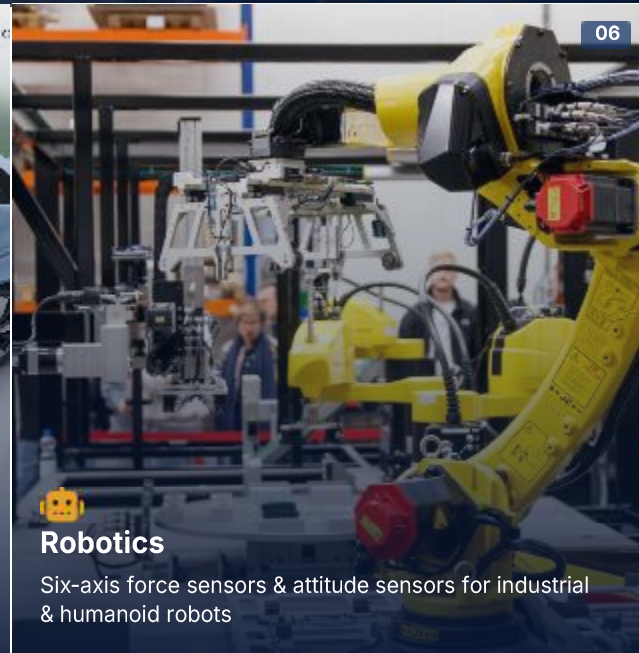
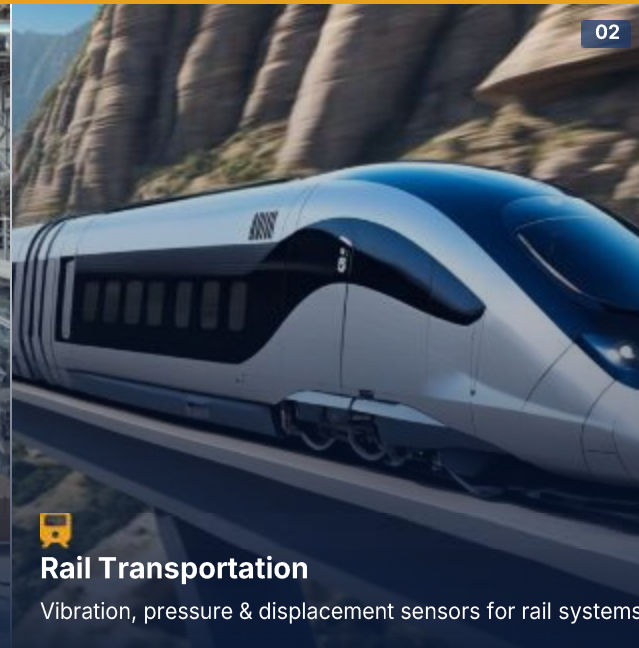
Validated for Automotive , Industrial Automation , and Medical applications



4 International Certifications | Comprehensive In-House Test Laboratory



Application Areas



Manufacturing Scale & Capacity

 HUAYUAN JINBO TECHNOLOGY



CLEANROOM FACILITY

5,000 m²

Operational sensor production cleanroom I currently active



ANNUAL CAPACITY TARGET

25M

Planned sensor production capacity per year I target 2028



RESERVED INDUSTRIAL LAND

18.2 ha

273.18 mu of land reserved for future facility expansion



GROUP ECOSYSTEM

60 +

Huayuan Group wholly-owned and holding subsidiaries



AUTOMATED PRODUCTION LINES

Die bonding, wire bonding, packaging, calibration, and final testing I fully automated processes



SCALABLE MANUFACTURING PARTNER

From prototype to high-volume production I backed by the full Huayuan Group industrial ecosystem



Integrated Engineering Solutions

UNIQUE CAPABILITY



Precision Manufacturing

Metal elastic components Precision sealing & compensation

+



Sensors

MEMS pressure, force, acceleration & temperature sensing

+



Electronics

SMT processing | PCB assembly | Signal conditioning



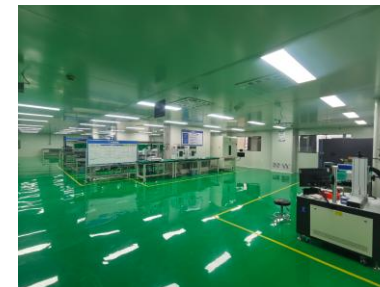
Our SMT production line

Inhouse precision and assembly capabilities



Complete System Solutions

Huayuan Jinbo uniquely combines Precision manufacturing (e.g. high precision bellows), sensor technology and production, and electronics capabilities under one roof enabling integrated sensing and actuation solutions for demanding industrial applications.



Reliability Testing capabilities

Final and reliability testing capabilities



Partnership Models



OEM Manufacturing

Volume production of customer-specified sensors to OEM requirements. Automated production lines with IATF 16949 quality system.

IATF 16949 CERTIFIED



ODM Development

Full product development from specification to production-ready sensor. Design, packaging, and calibration all included in scope.

END-TO-END DEVELOPMENT



Custom Sensor Development

Custom-made sensor design, packaging, and calibration for unique application requirements. Backed by Provincial R&D Center expertise.

R&D CENTER SUPPORT



Packaging & Test Services

Standalone sensor chip packaging in metal, ceramic, or plastic. Wire bonding, lid sealing, and full reliability testing services.

METAL | CERAMIC | PLASTIC



Joint Development Projects

Collaborative R&D with customer engineering teams, leveraging Huayuan Jinbo's design and packaging expertise. International partnership experience.

JPI | KRI | FRI | UK PARTNERS



Technology Transfer & Industrialization

Support for customers transitioning sensor designs from prototype to industrial-scale production. Full supply-chain setup and ramp-up assistance.

PROTOTYPE TO MASS PRODUCTION



Why Huayuan Jinbo

EXECUTIVE SUMMARY | KEY DIFFERENTIATORS

- ✓ **Sensor Design Capability**
MEMS chip & sensor design, Provincial R&D Center, 51 patents
- ✓ **Advanced Packaging Capability**
Metal, ceramic, and plastic packaging platforms
- ✓ **Reliability Validation Capability**
Comprehensive environmental, vibration, shock & reliability testing
- ✓ **Manufacturing Scalability**
5,000 m² today | 25 million units/year planned by 2028
- ✓ **Competitive Cost Structure**
Part of Huayuan Group | 60+ subsidiaries, integrated manufacturing ecosystem
- ✓ **Fast Customization**
From concept to prototype with in-house design and development
- ✓ **Long-term Partnership Approach**
International partners: Japan, South Korea, France, UK | stable group backing



Your trusted sensor development, packaging, testing and industrialization partner.



Contact Us

For European business development inquiries, please contact our team under the email address below.

Huayuan Jinbo Technology Co. Ltd.

Advanced Sensor Development, Packaging, Testing and
Industrialization Partner

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**Huayuan Jinbo Technology: Your trusted sensor
development, packaging, testing and
industrialization partner for European industrial
and automotive applications.**

