

Goermicro



Goertek Microelectronics

Goermicro Confidential. Do not spread if not privileged.

Goermicro

In 2017 established Goertek Microelectronics Co., Ltd to develop business in MEMS, integrated smart sensors and microsystem modules



Founded in 2001
Start of MEMS
Production



Staff 3000+
R&D Staff 700+

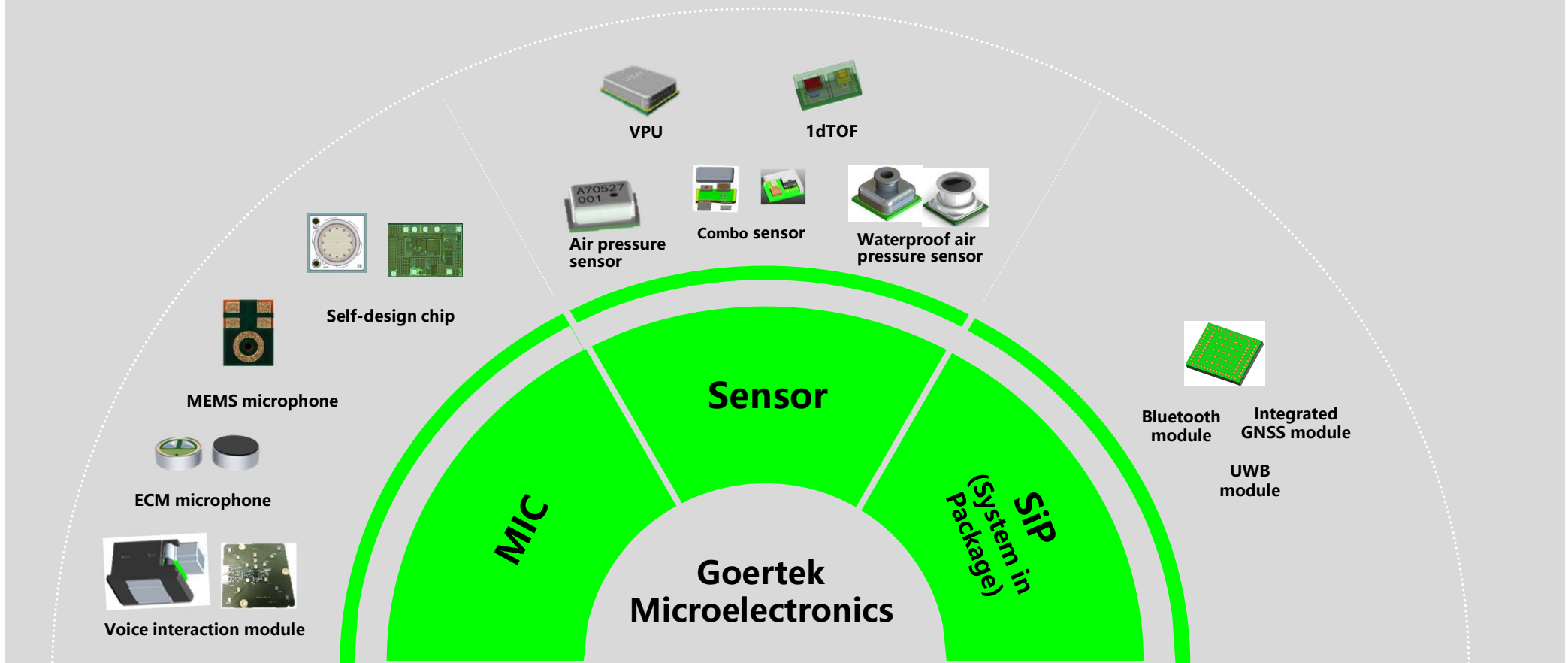


Patents: 1700+



R&D investment: $\geq 7\%$ of
revenue

In voice interaction, information acquisition/transmission and other fields, Goermicro focuses on chips, components, sensors, intelligent microsystem modules and other products.



Goermicro | Global Footprint

**5
R&D Centers**

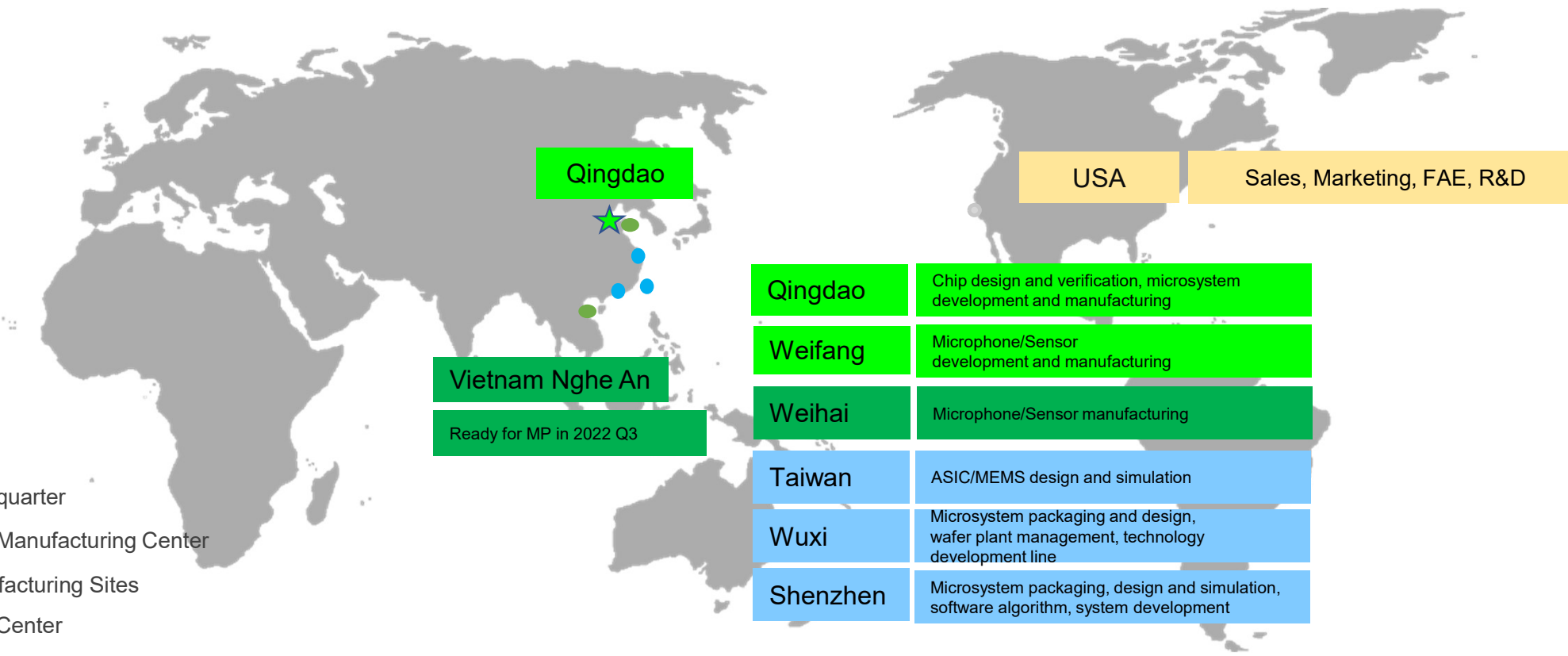
Qingdao, Weifang, Wuxi,
Shenzhen and Taiwan

**3
Manufacturing Sites**

Qingdao, Weifang and
Weihai

**3
Sales Centers**

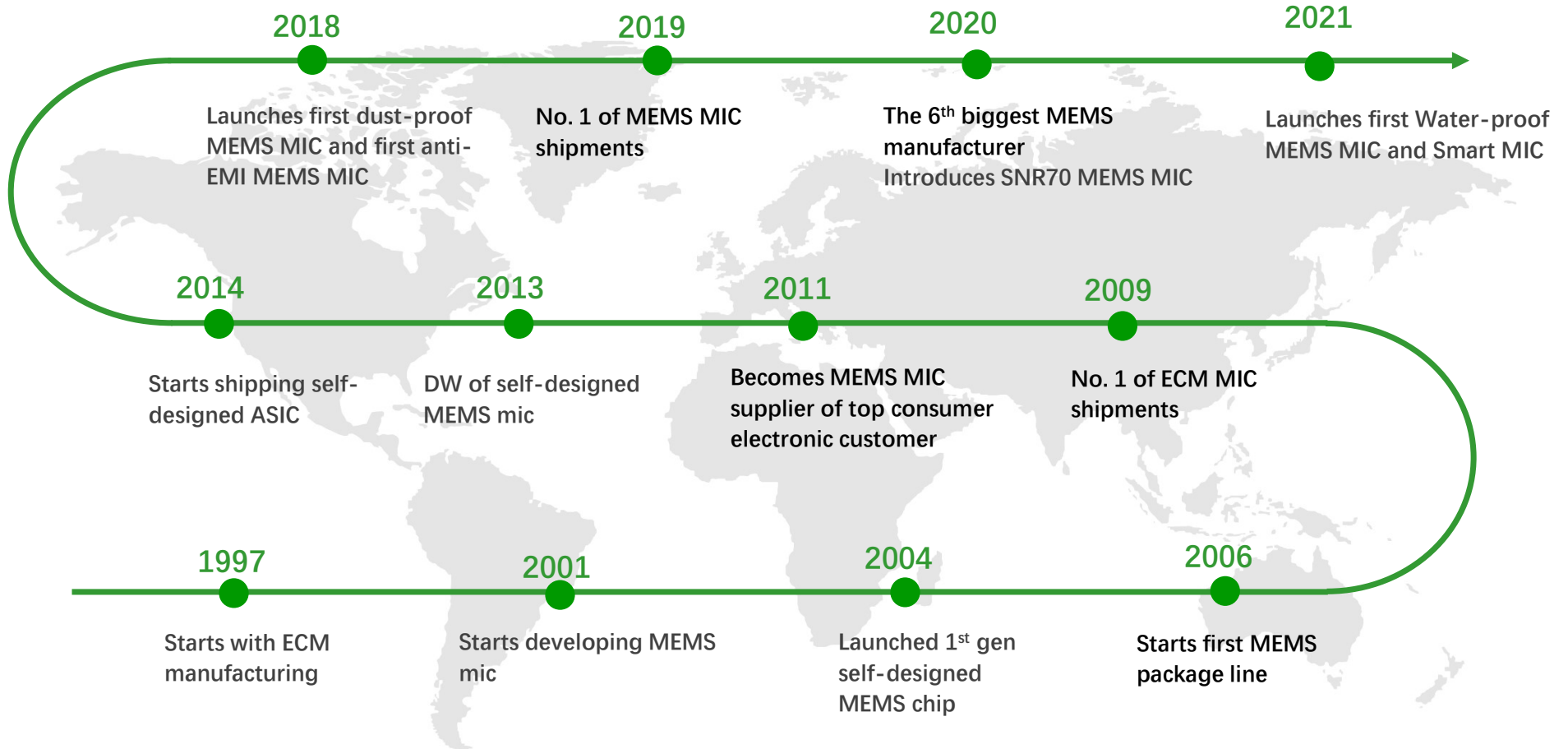
- Overseas Market: Santa Clara, USA
- Asia Pacific Market: Qingdao, China
- EMEA: Cologne



- ★ Headquarter
- R&D/Manufacturing Center
- Manufacturing Sites
- R&D Center
- Sales Center

Footsteps

Growing with our customers, Goermicro becomes the biggest EMC and MEMS MIC manufacturer, with values of ingenuity, creativity, reliability, and sustainability.

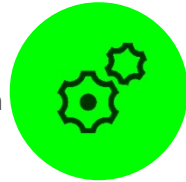


Quality Management & Certification



R&D Quality Assurance

Quality Design Verification
 Production Development Verification
 Design Process Validation
 Compatibility Test
 Reliability Test
 DFMEA



Manufacturing quality control

Supply Chain Quality Management
 Process Quality Control
 Quality control of shipment
 Logistics Quality Management
 Traceability Quality Control System
 Internal Review
 Non-conformity control
 Corrective and Preventive Measures



Quality management system

ISO9001
 Policy Target Management
 Management review
 Comprehensive Quality Management
 Green Partner System Management



Sony GP



TS 16949



ISO 14001



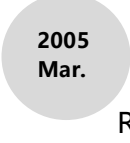
QC080000



ISO/IEC17025



ISO14001 NQA



RoHS & WEEE Directive Compliance



TS16949 DNV;(IATF16949) Renewed in Jul, 2018



OHSAS18001 DNV



QC080000 SGS



Sony Component Green Partner



ISO/IEC 17025



GM Audit Pass



BMW Audit Pass


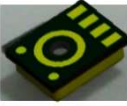
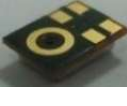
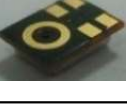



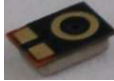
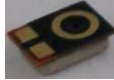



IATF16949 DNV



Microphones Overview

MEMS DMIC List

| No. | Model | MEMS | Status | Size(mm) | Test condition | Sensitivity | SNR (Typ.) | AOP(Typ.) | Current | LFRO | |
|-----|---------------|------|--------|--------------|----------------|-------------|------------|-----------|---------|------|---|
| 1 | SD17OB371-006 | SBP | MP | 3.1*2.5*0.85 | 1.8V | -37±1dB | 65.5dB | 130dBSPL | 1000uA | 20Hz |  |
| 2 | SD18OB371-075 | DBP | PVT | 3.5*2.65*1.1 | 1.8V | -37±1dB | 64dB | 132dBSPL | 1000uA | 28Hz |  |
| 3 | SD18OB371-132 | SBP | MP | 3.5*2.65*1.0 | 1.8V | -37±1dB | 66dB | 130dBSPL | 1000uA | 37Hz |  |
| 4 | SD18OB261-104 | SBP | MP | 3.5*2.65*1.0 | 1.8V | -26±1dB | 65dB | 118dBSPL | 750uA | 60Hz |  |
| 5 | SD18OB371-167 | SDM | ES | 3.5*2.65*1.0 | 1.8V | -37±1dB | 68.5dB | 128dBSPL | 440uA | 40Hz |  |

| No. | Model | MEMS | Status | Size(mm) | Test condition | Sensitivity | SNR (Typ.) | AOP(Typ.) | Current | LFRO | Pictures |
|-----|--------------|------|--------|---------------|----------------|-------------|------------|-----------|---------|------|---|
| 1 | S15OB381-124 | SBP | MP | 2.75*1.85*0.9 | 2.0V | -38±1dB | 62.5dB | 128dB SPL | <150uA | 90Hz |  |
| 2 | S15OB381-157 | SBP | MP | 2.75*1.85*1.0 | 2.7V | -38±1dB | 65dB | 128dB SPL | <150uA | 25Hz |  |
| 3 | S14OB381-057 | SBP | MP | 3.35*2.5*0.98 | 2.7V | -38±1dB | 64dB | 128dB SPL | <200uA | 40Hz |  |
| 4 | S18OB381-028 | SBP | MP | 3.5*2.65*1.0 | 2.7V | -38±1dB | 66dB | 124dB SPL | <200uA | 37Hz |  |
| 5 | S18OB381-046 | SDM | MP | 3.5*2.65*1.0 | 2.7V | -38±1dB | 70dB | 137dB SPL | <200uA | 45Hz |  |



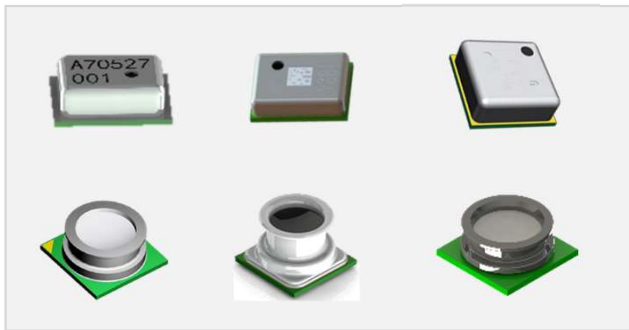
Sensor Overview



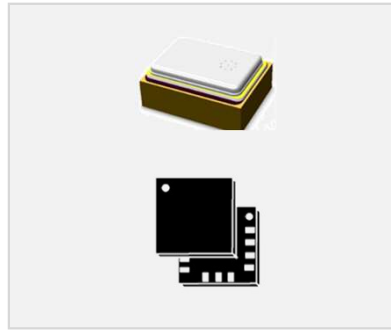
Sensor Products

- Sensor business started from 2015, now has pressure/inertia/combo sensor/optical sensor product lines
- Full chain development capability, total shipments exceeded 300 million

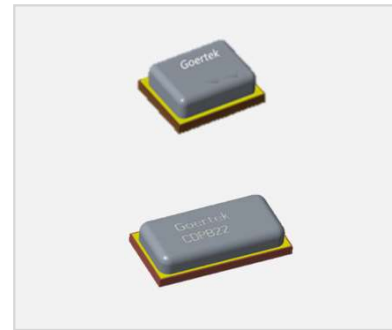
1. Pressure Sensor



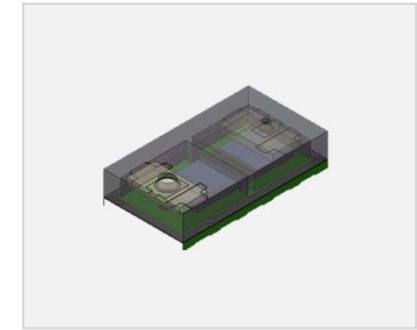
2. Inertial Sensor



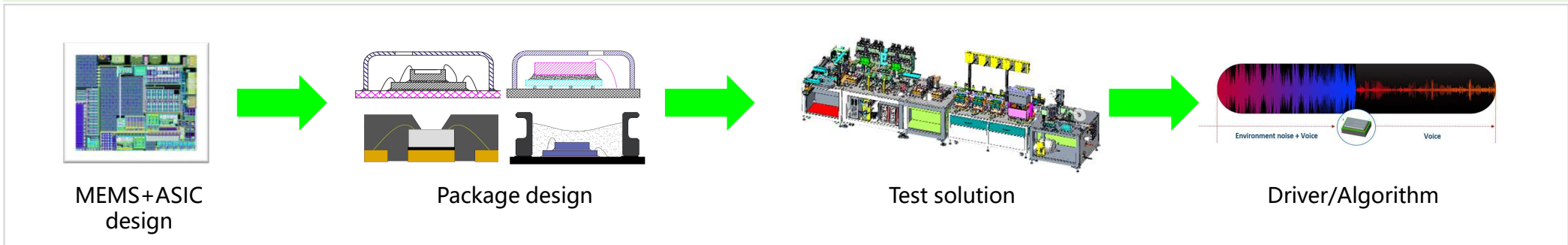
3. Combo Sensor



4. dToF Sensor



MEMS+ASIC design/Package design/Simulation/NPI experience/Algorithm development ability





Thank you

Goermicro Confidential. Do not spread if not privileged.