Cohu®

A unique solution for testing MEMS Inertial Sensors

All-in-one system for testing, calibration, final inspection and packaging

- Architecture isolates the test of MEMS from outside noise and vibration, significantly increasing test accuracy and output
- No special requirements on the production floor for either the handling system or the tester
- Up to 3,060 signal lines (shielded)
- High parallel testing of up to 250 devices simultaneously
- Sense+™ system features all the capabilities of a turret automation platform
- g-sense™ test solution is independent of the Sense+™ system with maximum freedom of movement
- NV-Core™ Inspection System provides full final inspection and unit-level traceability from wafer input to tape & reel output
- DI-Core™ Data Intelligence System providing real-time equipment monitoring and data analytics for increased productivity

Sense+ with g-sense

MEMS inertial test solution

Sense+ system with
g-sense test solution

High-volume production

g-sense test solution can be used standalone

Engineering

Significant improvement in test accuracy and parallelism

- Sense+ system can operate on a standard noisy test floor with no need to stop handling for idle or silent mode during test
- Two dynamic axis with 270° (-90° to 180°) for best possible test flow
- Accuracy
  - Stable angular velocity: Yaw rate +/- 0.005%
  - High position accuracy: Axes < +/- 0.1° (typical 0.05°)
  - Noise level on DUT position: <10 Hz: typical 270 µg rms
- 32-position turret test and scan complete finishing solution with full 6-sided optical inspection
- Solutions for different packages across different loading media, wafer, bowl, and tray testing
- Flexibility to reconfigure the Sense+ automation platform to test different sensors; inertial, microphone, microphone-loudspeaker[1], pressure[1], and magnet[1]
- g-sense test solution can be mechanically de-coupled from the Sense+ system for use as a standalone unit for engineering in a lab environment or low-volume manufacturing

(1) Roadmap development

NV-Core™

Inspection System

- Full 6-sided post testing die inspection
- Micro-scale defect detection down to 50 µm
- Vision assisted accurate die placement
- Completed unit-level traceability from wafer input to tape & reel output
- Pre-tape pocket integrity, in-tape device quality, and post-sealing quality inspection capabilities

DI-Core™

Data Intelligence System

- Real-time equipment monitoring and management
- Preventative maintenance
- Central recipe management
- Optimized yield and defect detection through real-time Artificial Intelligence inspection
- Knowledge database and unified reports

All specifications are subject to change without notification and are for reference only. For detailed performance specifications, please contact Cohu.

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