

# A unique solution for testing MEMS Microphones

## 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 for anechoic rooms or chambers on the production floor for either the handling system or the tester
- Signal-to-noise-ratio (SNR) testing  $\geq 80$  dB and  $>9K$  UPH
- Scalable in production from 16 up to 96 sites in parallel
- Sense+™ system features all the capabilities of a turret automation platform
- $\mu$ -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 tray or bowl input to tape & reel output
- PAICe™ Digital Twin Platform provides real-time equipment monitoring and data analytics for increased productivity

# Sense+ with $\mu$ -sense MEMS microphone test solution



Sense+ system with  
 $\mu$ -sense test solution  
High-volume production



$\mu$ -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
- $\mu$ -sense test solution isolated acoustic measurement unit (AMU) conducts the tests in a low sound environment
- $\geq 140$  dB sound pressure level (SPL) proven repeatability tests
- Can be utilized as incoming quality control at final assembly locations
- 32-position turret test and scan complete finishing solution with full 6-sided optical inspection
- Solutions for different packages across different loading media, bowl, and tray testing
- Flexibility to reconfigure the Sense+ automation platform to test different sensors; inertial, microphone, pressure<sup>(1)</sup>, and magnet<sup>(1)</sup>
- $\mu$ -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 bowl or tray input to tape & reel output
- Pre-tape pocket integrity, in-tape device quality, and post-sealing quality inspection capabilities



# PAICe™

## Digital Twin Platform

- 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.

REV20260512

[www.cohu.com/mems-microphone-test](http://www.cohu.com/mems-microphone-test)

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