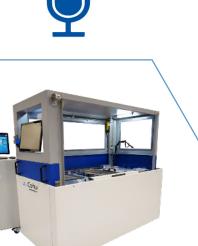# A unique solution for testing MEMS Microphones

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 up to 78 dB and up to 10K UPH

- Scalable in production from 16 up to 96 sites in parallel

- Sense+™ system features all the capabilities of a turret automation platform

- µ-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

- DI-Core™ Data Intelligence System providing real-time equipment monitoring and data analytics for increased productivity

Sense+ with μ-sense
MEMS microphone test solution

Sense+ system with
μ-sense test solution

High-volume production

μ-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
- μ-sense test solution isolated acoustic measurement unit (AMU) conducts the tests in a low sound environment
- ≥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[1], and magnet[1]
- μ-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

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