

# An Inspection & Metrology Platform for Large Semiconductor Packages

#### **Next Generation Package Inspection Platform**

- Saves IC devices manufacturers' inspection & metrology equipment 30% in capital expense,
  resulting in higher productivity.
- Increases throughput with innovative racing track technology and automatic yield recovery.
- Tray to Tape and reel and Tray to Tray process.
- Leaded, non-leaded packages QFN, QFP, BGA.
- 2 X 2 mm to 42.5 X 42.5 mm: up to 21,000 UPH including inspection.
- < 10 minutes automated conversion.</li>
- Yield gain with Artificial Intelligence.
- Industry 4.0 AGV, OHT compatible Tray I/O.
- NV-Core<sup>™</sup> Inspection System provides 6-sided, 3D inspection & metrology with micro-scale defect detection.
- DI-Core<sup>™</sup> Data Intelligence System providing real-time equipment monitoring and data analytics for increased productivity.

## **Krypton**



# Package Inspection & Metrology Tray to Tray and Tray to Tape



#### Up to 30% Higher Productivity

- Tray to Tape up to 21,000 UPH, Tray to Tray up to 16,000 UPH
- Featuring continuous-production race-track transfer technology with:
  - Direct sort of good and defective device for optimized throughput
  - Automatic second pass re-inspection for yield recovery
  - Micro-scale defect detection, 6-sided visible and infrared inspection, 3D Max vision system, and AI deep learning algorithms enabling pattern recognition and precise defect classification.
- Automation compatible solutions supporting factory automation and Industry 4.o.
- Semi-automated fast conversion, less than 10 minutes. Kit-less inspection stations.
- Footprint designed for floor space optimization less than 5 square meters.
- Extended scope of work to small devices in tray down to 2 x 2 mm and larger devices up to 42.5 mm x 42.5 mm.



#### **NV-Core**™

#### **Inspection System**

- Full 6-sided single unit post testing inspection and metrology
- Visible and infrared inspection capability
- True 3D measurement at 6 μm repeatability
- Micro-scale defect detection down to 20 μm
- Full 1D or 2D ID unit-level traceability from tray input to tape & reel and tray output
- Vision assisted accurate device placement



### **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.