May 07, 2024

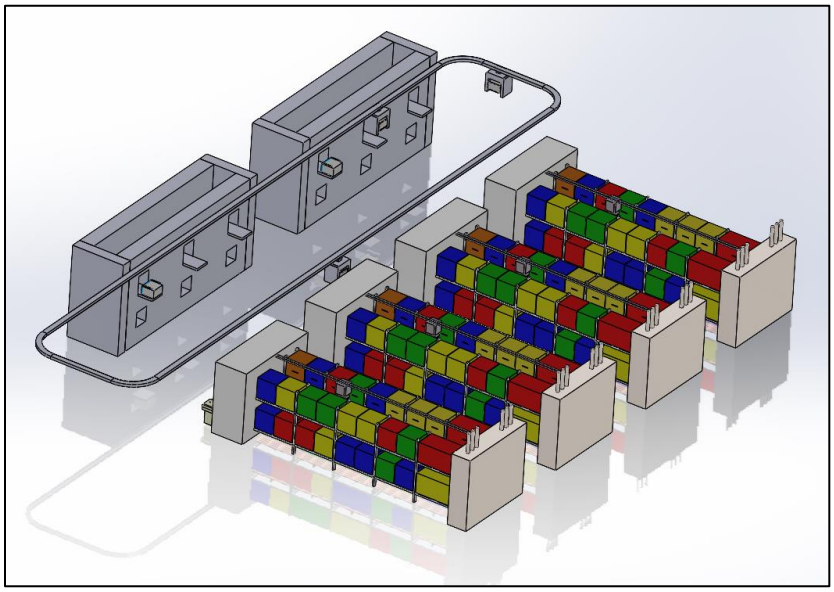
Establishment of Semiconductor Assembly Test Automation and Standardization Research Association

On April 16, 15 companies and organizations comprised of semiconductor manufacturers, manufacturing equipment, automated material handling system suppliers, and standardization organizations have established the “Semiconductor Assembly Test Automation and Standardization Research Association” (hereinafter referred to as “SATAS”). The mission of SATAS is to transform and fully automate packaging, assembly and testing manufacturing processes (hereinafter referred to as "Assembly-Test process"). Moving forward, SATAS will create the technical specifications and open industry standards necessary for Assembly-Test process automation, develop and implement equipment, and test the equipment and integrated pilot line with the objective of commercializing the solution in 2028. A key goal of this commercialization is that SATAS solutions are implemented in both existing (brownfield) and new (greenfield) factories.

In recent years, semiconductors have been positioned as "Strategic Goods" under the Act on the Promotion of National Security through Integrated Economic Measures, and companies involved in the semiconductor industry are required to build more resilient supply chains considering various geopolitical risks. In the coming AI era, innovation in advanced packaging technology (is expected along with semiconductor process technology. To achieve this innovation in a more sustainable way, there is an urgent need to automate the Assembly-Test factories for semiconductor manufacturing.

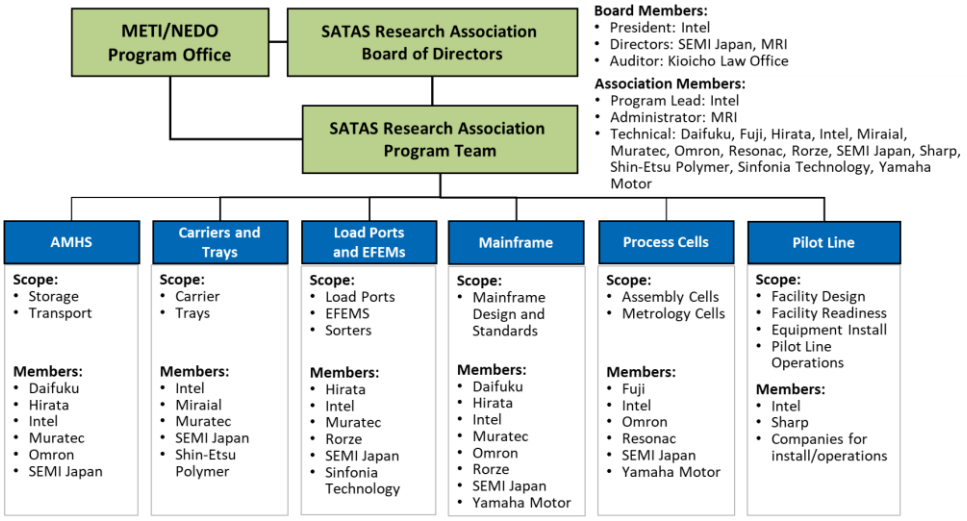
SATAS aims to promote the transformation of conventional semiconductor manufacturing and realize a more efficient, sustainable and flexible supply chain by developing, jointly verifying, and standardizing technologies necessary for the automation of Assembly-Test processes, led by semiconductor manufacturers, manufacturing equipment and automated material handling system manufactures leading the semiconductor industry.

Image of Assembly-Test process automation pilot line



Overview of the Semiconductor Assembly Test Automation and Standardization Research Association

Date of Establishment	April 16, 2024
Board of Directors	President: Kunimasa Suzuki (President, Intel K.K.)
	Director: Tomoki Takahashi (Value Creation Process Manager, Information and Communications, Mitsubishi Research Institute, Inc.)
	Director: Masahiko Hamajima (Representative of SEMI Japan)
	Auditor: Mieko Mio (Attorney-at-Law Kioicho Law Office)
Association Member ***Japanese alphabetical order**	Intel K.K. OMRON Corporation Sharp Corporation Shin-Etsu Polymer Co., Ltd. Sinfonia Technology Co., Ltd. SEMI Japan Daifuku Co., Ltd. Hirata Corporation FUJI Corporation Mitsubishi Research Institute, Inc. Miraial Co., Ltd. Murata Machinery Ltd. Yamaha Motor Co., Ltd. Resonac Holdings Corporation Rorze Corporation

SATAS Structure	
Headquarters Location	Mitsubishi Research Institute, Inc., 2-10-3 Nagatacho, Chiyoda-ku, Tokyo
Description of Business	SATAS promotes research and development related to the automation and standardization of semiconductor back-end processes. Focusing on the back-end processes, which will have a significant impact on the economics of semiconductor production, SATAS promotes standardization of equipment and systems necessary for labor saving and automation, and verify it on prototypes, commercial models, and a pilot line.