Media Release

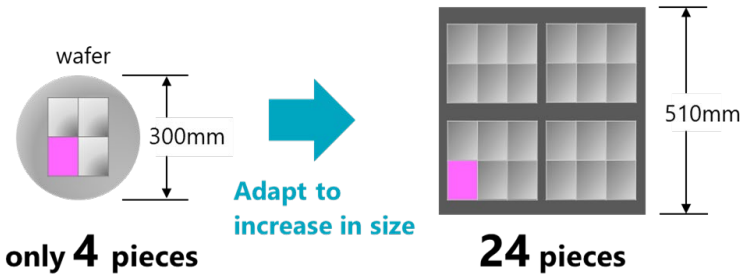
Flamatt, Switzerland – September 4, 2025

Comet joins JOINT3 Consortium

Comet announced today that, through its IXS division, it has joined the JOINT3 Consortium ("JOINT3") to develop next-generation semiconductor packaging. Comet's involvement reflects its strategy to broaden the application scope of its x-ray technologies, positioning the company at the forefront of innovation in semiconductor packaging and inspection.

JOINT3 is a co-creation evaluation framework established by Resonac Corporation (President and CEO: Hidehito Takahashi, hereinafter "Resonac") with the aim of accelerating the development of materials, equipment, and design tools optimized for panel-level organic interposers through collaboration among material, equipment, and design companies. JOINT3 brings together global leaders in the semiconductor supply chain. Using a prototype line for 515 x 510mm panel-level organic interposers, the consortium promotes the development of materials, equipment, and design tools optimized for panel-level organic interposers.

Conventional manufacturing methods involve cutting rectangular pieces from circular wafers. However, as interposers increase in size, the number of them that can be obtained from a single wafer is decreasing, posing a significant challenge. To address this issue, a manufacturing process that transitions from circular wafer shapes to square panel shapes is gaining attention, as it allows for a greater number of interposers to be produced from a given area of wafer.



With its recently launched CA20 x-ray system, Comet has set a new benchmark in non-destructive 3D inspection for wafers and advanced semiconductor packaging. Developed specifically for the industry, it delivers sub-micron resolution via cutting-edge computed laminography, revealing defects in seconds that previously took weeks to detect. From chiplets to HBM stacks, CA20 drives the "More-than-Moore" future with unmatched clarity and speed.

In the JOINT3 Consortium, Comet will be contributing its expertise in advanced x-ray systems to help push the boundaries of inspection capabilities beyond traditional solder-joint analysis. While early use focused on micro-bumps, the range of applications is far broader, opening doors to technologies not yet imagined. These insights, impossible before, will give the consortium partners a decisive edge in developing tomorrow's semiconductor innovations.

"Participation in the JOINT3 Consortium underscores our commitment to shaping the future of semiconductor manufacturing," said Dionys van de Ven, Division President X-Ray Systems (IXS) at Comet. "We are not only addressing the needs of today's applications, but also actively engaging in technologies that are still emerging and will define tomorrow's industry."

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Overview of JOINT3

Name	JOINT3 (JOINT: Jisso Open Innovation Network of Tops)
Objectives	Accelerate the development of materials, equipment, and design tools optimized for panel-level organic interposers through co-creation with participating companies.
Participating Companies (listed in alphabetical order)	27 companies (as of September 3, 2025): Resonac Corporation, AGC Inc., Synopsys, Inc., Applied Materials, Inc., ASMPT, Brewer Science, Inc., Canon Inc., Comet Yxlon, EBARA CORPORATION, Furukawa Electric Co., Ltd., Hitachi High-Tech Corporation, JX Advanced Metals Corporation, Nippon Mining & Metals Corporation, Kao Corporation, Lam Research, LINTEC Corporation, MEC COMPANY LTD., Mitutoyo Corporation, NAMICS Corporation, Nikko-Materials Co., Ltd., OKUNO CHEMICAL INDUSTRIES CO., LTD., Tokyo Electron Ltd., Tokyo Ohka Kogyo Co., Ltd., TOWA Corporation, ULVAC, Inc., Ushio Inc., ZUKEN Inc., 3M Company
Location	• Advanced Panel Level Interposer Center “APLIC” (Yuki City, Ibaraki Prefecture, Japan (within the Resonac Shimodate Plant (Minami-yuki))) • Packaging Solution Center (Kawasaki City, Kanagawa Prefecture, Japan)
Activities	• Developing materials, equipment, and design tools for organic interposers using a panel-level (515 x 510mm) prototype production line • Promoting development through co-creation by having material and equipment manufacturers produce common prototypes • Utilizing JOINT3 as a “training ground” for technology and equipment manufacturers to further enhance technologies related to panel-level organic interposers

The APLIC building (exterior image)

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Comet
Comet is a globally leading, innovative technology company based in Switzerland with a focus on plasma control and x-ray technology. With premium high-tech components and systems, we enable our customers to both enhance the quality of their products and make their manufacturing more efficient, and eco-friendly. Our innovative solutions are in demand in the semiconductor and electronics market, as well as other industrial sectors such as automotive and aerospace. Headquartered in Flamatt, Switzerland, Comet has a presence in all world markets. We employ more than 1,800 people worldwide, including about 700 in Switzerland. Besides production facilities in China, Denmark, Germany, Malaysia, Switzerland and the USA, we maintain various other subsidiaries in Canada, China, Japan, Korea, Taiwan and the USA. Comet (COTN) is listed on the SIX Swiss Exchange.

Resonac
Resonac is a functional chemical company established as a result of the integration of Showa Denko and former Hitachi Chemical in January 2023. The Company's sales revenue of semiconductor and electronic materials business for 2024 was about 450 billion yen. The Company is a world-class leader particularly in semiconductor materials for packaging process. The integration of the two companies has enabled Resonac to design functions of materials as well as to develop them in-house, going all the way back to raw materials. The trade name "RESONAC" was created as a combination of two English words, namely, the word of "RESONATE" and "C" as the first letter of CHEMISTRY. The Company will make the most of its co-creative platform, and accelerate technological innovation with semiconductor manufacturers, material manufacturers, and equipment manufacturers inside and outside Japan.

For detail, please refer to the Website of Resonac Holdings Corporation: https://www.resonac.com/