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NEWSLETTER

CONNECTS
Heterogeneous Integration for
Connectivity and Sustainability

Acronym: **HiCONNECTS**
Project Name: **Heterogeneous Integration for Connectivity and Sustainability**
Coordinating Institution: **NXP Germany**
Coordinator: **Ilan Englard**
GA Number: **101097296 – HORIZON-KDT-JU-2021-1-IA**
Start Date: **1 January 2023**
Duration: **45 months**
Consortium: **65 partners**

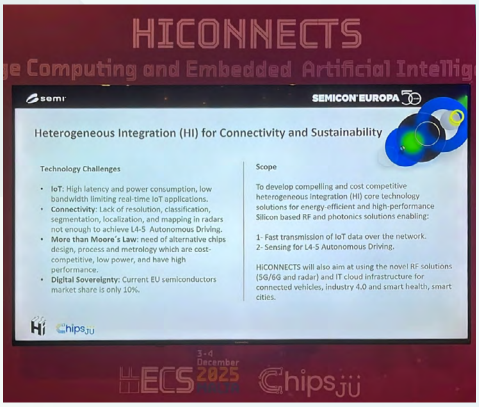
Welcome to the third edition of the HiCONNECTS Newsletter!

We're delighted to share the latest updates, highlights, and upcoming activities from across the HiCONNECTS network. Since our last issue, the project has continued to build momentum — with further milestones achieved, new events delivered, and collaborations deepened across the ecosystem. In this edition, you'll find key project updates, a look ahead at what's coming next, and opportunities to stay engaged and contribute. Thank you for continuing this journey with us — we look forward to staying connected.

HiCONNECTS at EFECS 2025 – Driving Europe's ECS Future

HiCONNECTS participated in EFECS 2025, held on 3–4 December 2025 in Malta, where the team hosted a well-attended booth and engaged with stakeholders from across the European semiconductor and ECS ecosystem. The event provided a valuable opportunity to showcase HiCONNECTS' work and connect with industry, research, and policy representatives.

Read more:
→ https://www.hiconnects.org/2025/12/03/hiconnects-at-efecs-2025-driving-europes-ecs-future/



Heterogeneous Integration (HI) for Connectivity and Sustainability

Technology Challenges

- **IoT**: High latency and power consumption, low bandwidth limiting real-time IoT applications.
- **Connectivity**: Lack of resolution, classification, segmentation, localization, and mapping in radars not enough to achieve L4-5 Autonomous Driving.
- **More than Moore's Law**: need of alternative chips design, process and metrology which are cost-competitive, low power, and have high performance.
- **Digital Sovereignty**: Current EU semiconductors market share is only 10%.

Scope

To develop compelling and cost competitive heterogeneous integration (HI) core technology solutions for energy-efficient and high-performance Silicon based RF and photonics solutions enabling:

1- Fast transmission of IoT data over the network.
2- Sensing for L4-5 Autonomous Driving.

HiCONNECTS will also aim at using the novel RF solutions (5G/6G and radar) and IT cloud infrastructure for connected vehicles, industry 4.0 and smart health, smart cities.

HiCONNECTS at the TechARENA, SEMICON Europa

HiCONNECTS featured at SEMICON Europa 2025 with a dedicated TechARENA session titled “From Chip to Impact: The HiCONNECTS Revolution.” The session showcased how HiCONNECTS and its partners are advancing Europe’s leadership in heterogeneous integration, with expert insights from **imec, AT&S, and PHIX Photonics Assembly**, and was chaired by Ilan England, HiCONNECTS Coordinator.

Learn more:

→ https://www.hiconnects.org/2025/11/30/hiconnects-at-semicon-europa-2025-showcasing-innovation-in-heterogeneous-integration/

Final HiCONNECTS Standards Workshop at SEMICON Europa 2025

The final HiCONNECTS Standards Workshop took place on 20 November 2025 at SEMICON Europa in Munich, with hybrid participation both onsite and online. The session marked the culmination of several years of collaboration on standardisation in heterogeneous integration and smart manufacturing, bringing together leading experts from industry and research to reflect on progress, share results, and discuss the way forward beyond the project’s lifetime.

Learn more:

→ https://www.hiconnects.org/2025/12/01/final-hiconnects-standards-workshop-at-semicon-europa-2025-advancing-standardisation-through-collaboration/

Heterogeneous Integration in Action – Webinar Now Available

HiCONNECTS recently hosted the webinar **"Heterogeneous Integration in Action: Powering the Next Era of Connectivity,"** bringing together experts from industry and research to explore how advanced integration technologies are enabling next-generation connectivity. The session highlighted key technical achievements across the consortium and is now available to watch on demand.

Learn more:
⟶ https://www.hiconnects.org/2025/10/01/watch-webinar-heterogeneous-integration-in-action-powering-the-next-era-of-connectivity/

HiCONNECTS Research Presented at AITEM Conference 2025

HiCONNECTS-related research was presented at the AITEM Conference 2025, where Elias El Achkar (Politecnico di Milano) shared a paper on a mathematical modelling approach to job allocation at STMicroelectronics. The work demonstrates how mixed-integer linear programming combined with digital twin models can improve process capacity planning and decision-making in semiconductor fabs, highlighting the strong link between academic research and real-world industrial impact within the HiCONNECTS ecosystem.

Learn more:
⟶ https://www.linkedin.com/feed/update/urn:li:activity:7384134471966433280

HiCONNECTS at SEMICON Taiwan 2025

HiCONNECTS was showcased at SEMICON Taiwan during the Heterogeneous Integration Global Summit, where Kartikey Srivastava presented the project in a dedicated session on pioneering trends and future solutions in heterogeneous integration. The presentation highlighted HiCONNECTS' role in advancing next-generation technologies and fostering global collaboration across the semiconductor ecosystem.

Learn more:

→ https://www.hiconnects.org/2025/09/20/hiconnects-at-semicon-taiwan-2/

HiCONNECTS at INSIDE Connect25, Málaga

HiCONNECTS was featured at INSIDE Connect25 in Málaga, where Mikko Himanka (Centria University of Applied Sciences) presented work from the project on situational awareness technologies for forest fire rescue and extinguishing operations. The presentation highlighted how HiCONNECTS innovations extend beyond traditional semiconductor applications to support public safety and societal resilience.

Learn more:

→ https://www.hiconnects.org/2025/09/24/hiconnects-at-inside-connect25-in-malaga/

HiCONNECTS at SEMI Europe's 3D & Systems Summit 2025

HiCONNECTS was featured at SEMI Europe's 3D & Systems Summit 2025 in Dresden, where Andrea Sanfilippo (NXP Semiconductors) presented the project during a session on European readiness across design, materials, and manufacturing. The presentation highlighted HiCONNECTS' role in advancing heterogeneous integration technologies, including chiplets and 3D integration, and showcased the strength of European collaboration in building a resilient semiconductor ecosystem.

Learn more:
⟶ https://www.hiconnects.org/2025/06/27/hiconnects-at-semi-europes-3d-systems-summit-2025/

HiCONNECTS at Silicon Saxony Day 2025

HiCONNECTS was represented at Silicon Saxony Day 2025, one of Europe's leading high-tech networking events, where the team engaged with industry leaders, researchers, and innovators at our own booth. The event provided an excellent platform to showcase HiCONNECTS' work in heterogeneous integration and next-generation microelectronics, while strengthening connections across Europe's vibrant semiconductor ecosystem.

Learn more:
⟶ https://www.hiconnects.org/2025/06/17/hiconnects-at-silicon-saxony-day-2025/

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