

Alliance on Processors and Semiconductor technologies

The Alliance on Processors and Semiconductor Technologies brings together key actors to design and produce microelectronics chips.



Industrial Alliance
for Processors and
Semiconductor Technologies

The Commission launched the European Alliance on Processors and Semiconductor technologies in July 2021. From smartphones to 5G to the Internet of Things and beyond, processors and semiconductor technologies are crucial for a successful Digital Decade.

The overall objective of the Alliance is to identify current gaps in the production of microchips and the technology developments needed for companies and organisations to thrive, no matter their size. This will help the competitiveness of companies, increase Europe's digital sovereignty and address the demand for the next generation of secure, energy-efficient, powerful chips and processors.

The Alliance will enhance and foster collaboration across existing and future EU initiatives. It will help to provide the EU with the necessary capabilities in semiconductor technologies to power its critical digital infrastructure and communication networks. And, it will support a range of sectors and technologies, including automotive, industrial automation, healthcare and AI-enabled systems.

This translates in 2 main lines of actions, addressing the main gaps Europe is facing:

1. **The reinforcement of the European electronics design ecosystem.** This includes design at leading-edge nodes and open-source hardware solutions, which will help develop powerful and resource efficient processors.
2. **The establishment of the necessary manufacturing capacity.** This includes assembly testing and advanced packaging, by a mix of local and global players, to produce the next generation of trusted processors, electronic components and technologies. This will translate into a twin track to be developed in parallel: moving Europe towards producing technologies from 16 nanometres (nm) to 10 nm, as well as from 5 nm to 2 nm and beyond. These most advanced type of semiconductors which, in addition to performance increases, have the potential to cut massively the energy used by everything from phones to data centres.

Who can join and how

Any organisation with relevant existing or planned activities in the area of processor and semiconductor technologies, including end-user companies, associations, and research and technology organisations, can join the Alliance. They can do so by signing the Declaration and filling in the application form provided they meet the eligibility criteria set out in the Terms of Reference.

Background

The Alliance will strengthen cooperation amongst actors in the EU to deliver more secure and competitive solutions in processor and semiconductor technologies. It will focus on the development of energy-efficient powerful components that are critical to ensure security, data protection and the competitiveness of EU businesses and citizens' services.

Processors and semiconductors are key enabling technologies for the emerging critical applications of data-processing, communications, data-infrastructure, cloud, advanced computing and AI. Semiconductors are classified as dual use technology. They are key to critical infrastructure, such as energy and communications and the EU's internal and external security, including defence and space.

Join the alliance

Declaration for the alliance

Terms of Reference

Latest

PRESS RELEASE | 19 July 2021
Commission launches alliances for
microelectronics and cloud technologies

The European Commission has kick-started two new Industrial Alliances: the Alliance for Processors and Semiconductor technologies, and the European Alliance for Industrial Data, Edge and

Cloud.

PRESS RELEASE | 23 February 2021

EU to set up new European Partnerships and invest nearly €10 billion for the green and digital transition

The Commission has proposed to set up 10 new European Partnerships between the European Union, Member States and/or the industry. The goal is to speed up the transition towards a green, climate neutral and digital Europe, and to make European industry more resilient and competitive. The EU will provide nearly €10 billion of funding that the partners will match with at least an equivalent amount of investment.

DIGIBYTE | 23 February 2021

Key Digital Technologies: new partnership to help speed up transition to green and digital Europe

The Commission announced a new partnership aimed at reinforcing Europe's innovation potential, boosting its competitiveness and ensuring technological sovereignty in the field of electronics.

PRESS RELEASE | 07 December 2020

Member States join forces for a European initiative on processors and semiconductor technologies

The Commission is welcoming a joint declaration by 22 EU Member States on processors and semiconductor technologies, discussed at the Video conference of the Ministers of Telecommunications this morning . Through their declaration, the Member States will commit to work together to bolster Europe's electronics and embedded systems value chain and strengthen leading-edge manufacturing capacity, in view of reinforcing Europe's capabilities in semiconductor technologies and offering the best performance for applications in a wide range of sectors.

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Big Picture

Electronics

Micro and nano-electronics take us to the world in miniature, where big things are facilitated by the smallest and smartest electronic components and systems.

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<https://digital-strategy.ec.europa.eu/policies/alliance-processors-and-semiconductor-technologies>